NATAHLIE NORDBERG (AN INFANT SUING THROUGH HER MOTHER AND NEXT FRIEND, ELIZABETH CHIN YEW KIM) v. DR QUAH THONG SAI & ANOR AND ANOTHER CASE

HIGH COURT MALAYA, PULAU PINANG
S NANTHA BALAN JC
[CIVIL SUITS NO: 22NCVC-224-03-2012 & 22NCVC-563-08-2012]
30 DECEMBER 2014

TORT: *Negligence – Medical negligence – Suit against obstetrician and gynaecologist – Shoulder dystocia – Method of delivery – Whether doctor should have advised patient to deliver via caesarean section – Whether fetal weight and size of baby before delivery taken into consideration – Whether patient placed in McRobert's position for delivery – Whether supra-pubic pressure applied – Whether method of manoeuvre used during delivery caused injury to baby's shoulder – Whether excessive force used during delivery – Whether infant suffered attention deficit hyperactivity disorder and learning disorder – Whether hospital vicariously liable for doctor's negligence*

Vide suit 22NCVC-224-03-2012, the plaintiff sued the defendants for medical negligence and *vide* suit 22NCVC-563-08-2012, Lam Wah Ee Hospital ('the hospital') sued PW2 (the patient) and PW3 (the guarantor) for outstanding medical charges for the sum of RM30,467.85. The facts revealed that on 19 September 2000, PW2 delivered Natahlie Nordberg ('Natahlie/baby/infant') in the hospital. The delivery was attended by DW1, an obstetrician and gynecologist ('O&G'). Natahlie's head was delivered spontaneously at 2.03am. However, difficulties arose during the delivery of Natahlie's anterior shoulder. DW1 tried certain manoeuvres and Natahlie was fully delivered at 2.06am. The plaintiff's case emerged from the fact that Natahlie suffered shoulder dystocia due to the inappropriate method of delivery used by DW1. It was asserted that the problem arose as soon as Natahlie's head emerged from the birth canal as DW1 was confronted with a case of shoulder dystocia. As a result of the childbirth trauma, Natahlie suffered from, *inter alia*, anoxic-ischaemic injury to the brain, brachial plexus injury, phrenic nerve injury with diaphragmatic paralysis, bilateral adrenal haemorrhage as well as hypoxic gut with transient lieus. It was alleged that the phrenic nerve injury with diaphragmatic paralysis compromised the infant's ability to breathe and she had to be on a ventilator at the neonatal intensive care unit. The issues that arose for consideration, *inter alia*, were (i) whether shoulder dystocia was predictable; (ii) whether DW1 should have advised PW2 to deliver *via* ceasarean section instead of vaginal delivery taking into consideration the fetal weight and size of the baby; (iii) whether PW2 was placed in the McRobert's position for delivery; (iv) whether supra-pubic pressure was applied; (v) whether the method of manoeuvre used by DW1 to deliver the baby caused injury to her anterior shoulder; (vi) whether excessive force

instead of gentle traction was used during delivery; (vii) whether the use of oxytocin *via* intravenous drip should have been stopped when shoulder dystocia was discovered; and (viii) whether Nathalie suffered from attention deficit hyperactivity disorder ('ADHD') and learning disorder which were caused by the birth trauma. In respect of the second defendant, the plaintiff claimed that the hospital was vicariously liable for DW1's actions and omissions. However, it was argued that DW1 was an independent contractor and the hospital was not liable for DW1's alleged negligence.

Held (allowing plaintiff's claim against the first defendant; allowing hospital's claim against PW2 and PW3):

(1) The fetal weight was only an estimation and a clinical judgment by DW1. Even if DW1 had determined the fetal weight to be more than 4,500g, he would have been entitled to assume that a macrosomal baby may not present shoulder dystocia. Further, medical literature suggests that elective caesarean based on suspected macrosomic baby was not recommended unless there were other risk factors such as diabetes. On the facts, there was no clear medical evidence to sustain a charge of negligence based on DW1's so-called failure to accurately estimate the baby's weight and his failure to advise PW2 to opt for caesarean section. Even if DW1 had properly determined the baby's weight, a decision on his part to allow PW2 to deliver per vaginal could not be equated with negligence on his part as there was no clear medical evidence that a macrosomic baby would present shoulder dystocia. (paras 74, 77 & 79)

(2) The failure to stop oxytocin and/or to advise PW2 to stop pushing could not be regarded as negligent conduct since there was no proof that these had contributed to/or aggravated the shoulder dystocia. DW1 did not delay in his attempt to resuscitate the baby. As a result, the baby did not, *inter alia*, suffer more serious cerebral injury due to DW1's quick efforts. In light of this, DW1 had done an impeccable job in resuscitating the baby who had to be re-intubated. (paras 82, 85, 86 & 87)

(3) When the baby was delivered, it was still acceptable for fundal pressure to be used as one of the manoeuvres for shoulder dystocia. The studies done on this subject even before 2000, which highlighted the risks of using fundal pressure, were just studies and had not been accepted as a firm benchmark by the O&G fraternity in general and the Royal College of Obstetricians and Gynaecologists Guideline ('RCOG') in particular. It would be wrong as a matter of legal principle to use a RCOG guideline issued in 2005 to impugn the conduct of DW1 in using fundal pressure as being negligent. As such, the use of fundal pressure on PW2 during delivery in 2000 as a response to shoulder dystocia was not evidence of negligence on the part of DW1. Further,

DW1 was indeed faced with a medical emergency and had to take very quick steps to prevent serious injury or death to the baby and the mother. (paras 94, 95, 97 & 98)

(4) DW1 was dealing with a childbirth emergency and had a narrow window of opportunity between three to four minutes to deliver the baby. He had to act fast and decisively to ensure that the baby did not suffer from suffocation/asphyxiation. Hence, it may have been necessary to use the necessary traction to deliver the baby out of the birth canal so that the physical and cerebral damage to the baby was minimised. The choice was for the O&G to make as he had to decide the amount of traction to be used in a situation where the shoulder dystocia remained intractable. DW1 had to be given maximum leeway and professional discretion to use such manoeuvres and methodology as appropriate in the circumstances including, *inter alia*, the use of traction and delivering the baby provided he did not omit any fundamental and imperative procedure such as the McRobert's position/supra-pubic pressure which the profession regards as key to a situation such as shoulder dystocia. (paras 101, 103 & 111)

(5) The charge of negligence against DW1 pivots on the issue of the use of the McRobert's position and supra-pubic pressure. DW1 would have mentioned in his report if he had used the McRobert's position. However, DW1's medical case notes and reports were conspicuously silent about these methods. Further, both PW2 and her husband, PW3, confirmed that the former was never placed in the McRobert's position. It was questionable as to whether DW1 could have, *inter alia*, placed PW2 in the McRobert's position, instructed the midwife to apply supra-pubic pressure, switch to fundal pressure, attempt to hook the baby's shoulder, did an internal rotation and fully deliver the baby at 2.06am, *ie*, within the span of three to four minutes thereafter. (paras 116, 119, 121 & 122)

(6) It was more probable that PW2 was not placed in the McRobert's position and supra-pubic pressure was not applied. As such, in view of the pre-eminent position that McRobert's position and supra-pubic pressure played in the resolution of shoulder dystocia, the failure of DW1 to employ these steps constitutes negligence. It was the baby's shoulder dystocia and DW1's flawed delivery method, *ie*, failure to employ the McRobert's position and apply supra-pubic pressure, which left the infant with the bundle of injuries. If he had done so, there would have been a good chance that the baby may have been spared from the traumatic birth injuries or at least she would have been delivered with minimal injuries. As such, DW1 fell below the standards of a reasonable competent practitioner in his field. (paras 126, 127 & 129)

(7) The plaintiff had proved on a balance of probabilities that Natahlie had ADHD and learning disorder which were caused by birth trauma. However, her condition was on the mild side. A child who has a severe case of ADHD and learning disorder would not have left a lasting impression on two medical specialists who opined that she was a bright girl with a great future ahead of her. Academically, she was not a total failure and this may be gleaned from the fact that she attained an "A" for English in her standard six public examinations. However, the infant would require medication and behaviour therapy to treat ADHD and counselling to help with acceptance and to increase her skills to cope with having a disability. There was a causal connection between the birth trauma and ADHD or learning disorder. Whilst the infant did not have mental retardation, she had pockets of problems in certain intellectual aspects. Further, there was no evidence of any genetic contribution to these conditions. (paras 136, 137, 138 & 140)

(8) The infant suffered from hypoxia or lack of oxygen to the brain for which she was ventilated and underwent a surgical procedure so that she could breathe properly. The anoxic-ischaemic injury to the brain was a transient nature with no long lasting effect such as epilepsy or other cerebral related problems. The anoxic-ischaemic injury to the brain appeared to have left the infant with no cerebral damage other than ADHD and learning disorder. Under intellectual impairment, the quantum would increase exponentially depending on the severity of the intellectual impairment. In this case, there was no mental retardation. However, the infant's learning disorder and ADHD fell within the category of intellectual impairment. Since the intellectual impairment was on the mild side, a sum of RM60,000 was awarded which encompassed the anoxia ischamic injury, ADHD and learning disorder. For brachial plexus injury to the upper limb, a sum of RM75,000 was awarded. (paras 150, 151, 157, 159 & 163)

(9) The plaintiff was awarded special damages in relation to, *inter alia*, the costs of delivery and further treatment ("kos pendaftaran dan rawatan/ kos kelahiran anak dan rawatan lanjut"). These items had been proved and were claimed by the hospital for the outstanding charges which would not have been incurred if not for DW1's negligence. There was no evidence that the infant was in need for any nursing care since she was a normal child with some residual issues such as ADHD and learning disorder. (paras 167 & 170)

(10) The plaintiff's entire effort during trial was directed at establishing DW1's negligence but no evidence was led in respect of the hospital's liability. The plaintiff had not proved that DW1 was a servant or agent or employee of the hospital and had not discharged their legal burden of proving vicarious liability against the hospital. Further, no evidence

was led to suggest that the hospital was negligent in terms of their nursing care or support system. As such, the plaintiff's claim against the hospital was dismissed. In the medical negligence case, however, the parents of the infant were liable to settle the outstanding charges. The claim for RM30,467.85 was therefore allowed. (paras 172-175)

Case(s) referred to:
Bolam v. Friern Hospital Management Committee [1957] 1 WLR 582 ***(refd)***
Bolitho v. City and Hackney Health Authority [1997] 4 All ER 771 ***(refd)***
Foo Fio Na v. Dr Soo Fook Mun & Anor [2007] 1 CLJ 229 FC ***(refd)***
Hucks v. Cole [1968] 112 SJ 483 ***(refd)***
Roe v. Minister of Health [1954] 2 WLR 915 ***(refd)***
Rogers v. Whitaker [1992] 175 CLR 479 ***(refd)***
Wilsher v. Essex Area Health Authority [1987] QB 730 ***(refd)***

Other source(s) referred to:
Labor and Delivery Care - A Practical Guide, Chapter 13, p 274

Suit No. 22NCVC-224-03-2012
For the plaintiff - N Ahilan; M/s N Ahilan & Assocs
For the 1st defendant - JA Yeoh (Siti Hawa with him); Shearn Delamore & Co
For the 2nd defendant - Rajivan; Sitham & Assocs

Suit No. 22NCVC-563-08-2012
For the plaintiff - Rajivan; Sitham & Assocs
For the defendants - N Ahilan; M/s N Ahilan & Assocs

Reported by Kumitha Abd Majid

JUDGMENT

S Nantha Balan JC:

Background

[1] Suit No. 22NCVC-224-03-2012 is an action for medical negligence by an infant named Natahlie Nordberg ("Natahlie") who is suing through her mother and next friend Elizabeth Chin Yew Kim ("PW2"). Wherever the words "foetus", "baby" and "infant" appear in this judgment, then that is to be taken as referring to Natahlie. The defendants are Dr Quah Sai Thong ("Dr Quah" – "DW1") and Lam Wah Ee Hospital ("the hospital") respectively. In this judgment I shall refer to the first defendant (Dr Quah) as DW1. Suit No. 22NCVC-563-08-2012 is an action by the hospital for outstanding medical charges. This is my judgment for both these suits.

[2] Natahlie was born on 19 September 2000 at the hospital. DW1 was the Obstetrician and Gynaecologist ("O&G") who delivered Natahlie. On that day the baby's head was delivered at 2.03am. The baby was fully delivered 3-4 minutes thereafter. The baby's weight at delivery was 4.95kg (10Ibs 15oz). Natahlie's birth was a most difficult and traumatic one. In this case, the delivery was not just a difficult one, rather it became a child

birth emergency as DW1 was faced with a foetus with shoulder dystocia. The process of labour itself was not prolonged and there was no prior indication that PW2's delivery was going to be difficult. The problem arose as soon as the baby's head emerged from the birth canal as DW1 was confronted with a case of shoulder dystocia.

[3] As a result of the childbirth trauma, the infant suffered anoxic-ischaemic injury to the brain, brachial plexus injury (Erb's palsy), phrenic nerve injury with diaphragmatic paralysis, bilateral adrenal haemorrhage as well as hypoxic gut with transient lieus. The phrenic nerve injury with diaphragmatic paralysis initially compromised the infant's ability to breathe and she had to be on a ventilator at the Neonatal Intensive Care Unit ("NICU") of the hospital and eventually underwent a surgical procedure called right thoracotomy and plication of the right hemi-diaphragm.

[4] It is a well known fact that during childbirth many things can go wrong. In most cases, it is just fortuitous that nothing untoward happens and the delivery is uneventful. But when there is a childbirth emergency, it becomes a battlefield situation for the obstetrician who has to fight against time to save the baby and the mother. The situation of the foetus in the mother's womb and the ultimate journey through the birth canal has been said to be a treacherous one. In this regard, Dato' Dr Ravindran Jegasothy ("PW1") (Retired Senior Consultant Obstetrician and Gynaecologist – plaintiff's expert witness) had explained the risks of childbirth as follows. He said, "the passage of the human foetus through the period of labour is the most dangerous and treacherous journey in human life as it is riddled with so much danger and carries the risk of injury and death to both mother and the foetus".

Shoulder Dystocia

[5] In order to understand the exigencies in the delivery room on 19 September 2000, it is necessary to understand what happens when there is shoulder dystocia. Shoulder dystocia occurs when the anterior or upper shoulder of the foetus gets impacted or stuck onto the mother's pubic bone (or anatomically known as pubic symphysis) after the head has already been delivered through the birth canal.

[6] According to PW1, once shoulder dystocia is presented, the O&G must act urgently and undertake various delivery manoeuvres to deliver the foetus safely from the womb without causing any injury to the child. Basically what happens in shoulder dystocia is that the baby's head is delivered but the shoulder gets stuck or stopped by the pubis. Hence, with the baby's head out of the birth canal and the neck still within the birth canal, the baby will suffocate whilst the nerves that run along the neck and shoulder are being stretched.

[7] One of the critical issues that arose for consideration in this trial was whether shoulder dystocia was predictable. As to the predictability of shoulder dystocia, the evidence of PW1, DW1 and the defendant's expert, Dato' Dr Alex Mathews ("DW5") seems to initially converge in that they all agreed that the occurrence of shoulder dystocia is mostly unpredictable. In this regard, it is relevant to note that even, the Royal College of Obstetricians and Gynaecologists Guideline No. 42 on Shoulder Dystocia ("RCOG Guideline") acknowledges that shoulder dystocia is "a largely unpredictable and unpreventable event" (see p. 101 Bundle Q). This is also the common theme in all the other medical literature that was presented to this court.

[8] However, according to PW1, in certain well defined or obvious situations, the O&G ought to have anticipated shoulder dystocia and advised the patient to elect for delivery *via* caesarean section. In this regard, PW1 took the firm position that in this case, DW1 ought to have accurately estimated fetal weight and anticipated a macrosomic baby (large baby where the fetal weight is more than 4500g) and the likelihood of shoulder dystocia.

[9] As such, he said DW1 wrongly estimated fetal weight at nine pounds (4.08kg) whereas the baby's weight at birth was in fact 4.95kg. As such, PW1 opines that it was negligent of DW1 to have merely done clinical estimation of fetal weight and consequently in failing to advise PW2 to elect for delivery *via* caesarean section.

[10] Also, PW1 opined that since PW2's last delivery was on 6 September 1999 *via* caesarean section, the inter-gestational period between the delivery in 1999 and 2000 was too short and there was therefore a risk of uterine rupture. For PW2's first delivery in 1999, caesarean section was indicated as there was intra-partum high blood pressure and foetal tachycardia. According to PW1, caesarean section was indicated for the second delivery because of the risk of uterine rupture. But as it turned out, uterine rupture did not materialise. PW1 says this was purely fortuitous.

[11] There are other aspects of DW1's handling or alleged mishandling of the delivery on 19 September 2000 that was adverted to by PW1, which he says are a manifestation of negligence on DW1's part. I will come to all of that later in this judgment.

[12] One of the key issues that became the focus of dispute in this case is whether or not DW1 ought to have accurately determined the weight and size of the baby and thus have anticipated shoulder dystocia and advised PW2 to undergo delivery *via* elective caesarean section which would have ensured safe passage for the baby. That will also be dealt with in the later part of this judgment.

[13] As to what an O&G should and should not do in response to shoulder dystocia, PW1 explained that when shoulder dystocia is encountered the O&G must do certain things and not do certain things ("the dos and don'ts") as set out in the RCOG guideline. In the opinion of PW1, DW1 did not abide by the RCOG guideline in material aspects. In the present case, as a result of the shoulder dystocia, DW1 tried to deliver the baby using certain delivery methods and fully delivered the baby at 2.06am. In this regard, PW1 opines that DW1 did not use appropriate delivery methods when presented with shoulder dystocia.

[14] At this point, it is imperative for me to point out that at 2.03am, the baby's head was delivered spontaneously. DW1 encountered difficulty with delivery of the baby's anterior shoulder. Then, he tried certain manoeuvres and the baby was fully delivered at 2.06am. Thus, it took DW1 about three minutes to fully deliver the baby after the head had emerged. In the words of DW1, "after 3-4 minutes of trying, I finally delivered the anterior shoulder and the baby". (See DW1's report dated 27 February 2001 at p. 40 Bundle B). As such, the trial focused on what DW1 did (and did not do) during the critical 3-4 minutes before the baby was fully delivered.

APGAR Score

[15] As a result of the birth trauma, Natahlie's prognosis upon delivery was poor. The first test or medical assessment of a newborn baby that is undertaken by the paediatrician is the APGAR score. An APGAR score is essentially a newborn baby's first test and is given one minute after a baby is born and then again five minutes later. The APGAR score assesses the newborn's appearance (skin colour), pulse, grimace (reflex), activity (muscle tone), and respiration.

[16] Although the APGAR score was developed in 1952 by an anaesthesiologist named Virginia Apgar and the score or test took its name after her, paediatricians commonly use the term APGAR as an acronym for the newborn's Appearance, Pulse, Grimace, Activity, and Respiration. A perfect APGAR score is ten and typical APGAR scores are seven, eight, or nine. In the present case, one minute after birth Natahlie's APGAR score was 4. At five minutes after birth her APGAR score remained at 4. This meant that she was doing poorly after birth. Her poor APGAR score was no doubt attributable to the several injuries that she suffered at childbirth.

[17] There is no doubt that the presentation of shoulder dystocia and the manoeuvres by DW1 to deliver her left Natahlie with a serious nerve injury called brachial plexus injury or Erb's palsy. This became a permanent injury and she has substantially lost the use of her right hand as described by the orthopaedic specialists in the reports that were presented to this court.

[18] The infant is admittedly unable to lift her right hand beyond the shoulder and cannot rotate the right hand. She is able to use the right hand to handle gadgets like a mobile phone or the computer. And so whilst she cannot do many things with her right hand, it is not exactly correct to say that the right hand is totally useless.

[19] Apart from the physical damage to the right hand, she also sustained some cerebral injury. This is due to the fact that there was a period of time during delivery when blood and oxygen flow to the brain was disrupted and she therefore suffered a brain injury known as ischaemic hypoxic encephalopathy.

[20] As a result of the brachial plexus injury she also suffered a right phrenic nerve paralysis. She also suffered from bilateral adrenal haemorrhage as well as hypoxic gut with transient *lieus*. She had to undergo a surgical procedure called right thoracotomy and plication of the right hemi-diaphragm.

[21] At the time of the trial which commenced on 4 September 2014, she was 14 years old and in Form 2 and attending home school. According to her mother Elizabeth Chin Yew Kim (PW2), Natahlie had to be taken out of the normal convent school as she was failing in her studies. Evidence was presented through Dr Zasmani Shafiee (Consultant Adult and Child Psychiatrist) ("PW4") who had examined the infant when she was about ten years old and determined that she suffered from attention deficit hyperactivity disorder ("ADHD") and learning disorder.

[22] PW4 attributes these conditions to the birth trauma and more specifically to the anoxic-ischaemic injury to the brain. However, Dr Chua Chee Peng (Consultant Neonatologist and Paediatrician)("DW3") said that he does not subscribe to the theory that ADHD and learning disorder is caused by birth trauma. He said that these conditions are due to unknown causes.

[23] To continue the narrative, a day after delivery of Natahlie, her mother, PW2 was discharged but the infant had to be hospitalised as she required intensive care at the NICU of the hospital. Natahlie was in the NICU from 19 September 2000 until 15 November 2000. The hospital charges for the baby's treatment at the NICU remain unpaid. Thus, the hospital is claiming these amounts from PW2 and Natahlie's father, Mats Nordberg ("PW3") who stood as guarantor for the hospital charges.

The Legal Actions

[24] A few years after Natahlie was born, the hospital commenced an action to recover the hospital charges which were outstanding. The hospital's claim was filed in 2004. Until then Natahlie's mother did not initiate any legal action against DW1 and the hospital for the childbirth

mishap which took place on 19 September 2000. But after the hospital filed a claim in the Sessions Court at Georgetown for outstanding hospital charges, Natahlie filed a suit through her mother PW2) against DW1 and the hospital based on a claim for medical negligence. The medical negligence suit was filed in the Sessions Court at Georgetown on 18 September 2006, which is the very last day before the claim became time barred.

[25] Both these actions were then transferred to the High Court and registered as 2012 suits. However, it should be noted that the cause of action in contract/tort arose in September 2000 and the original actions by the hospital and Natahlie were in fact filed in 2004 and 2006 respectively. It is therefore quite unfortunate that both these actions have been languishing for so many years after they were filed. The trial of this matter eventually took place on 4 September 2014, 5 September 2014, 14 October 2014 and 30 October 2014.

The Suits By Natahlie And The Hospital

[26] The two suits (that are) before me are Penang High Court Suit No. 22NCVC-224-03-2012 ("the medical negligence claim") and Suit No. 22NCVC-563-08/2012 ("the hospital's claim"). In the medical negligence claim, Natahlie has (through her mother and next friend, Elizabeth Chin Yew Kim) sued DW1 and the hospital for medical negligence *vis-a-vis* the delivery of Natahlie on 19 September 2000.

[27] In the hospital's claim for outstanding charges, the hospital has claimed against Elizabeth Chin Yew Kim (PW2) and Mats Nordberg (PW3) the parents of Natahlie, a sum of RM30,467.85 as outstanding hospital charges. Elizabeth Chin Yew Kim (PW2) has been sued as the primary patient and Mats Nordberg as the guarantor pursuant to a letter of guarantee dated 18 September 2000 (p. 1 Bundle E).

[28] According to PW2, the sums claimed as special damages in the medical negligence claim are for expenses incurred for resuscitation and NICU (paediatric charges), which would not have been incurred, if not for the negligence of DW1. Essentially, the amount that the hospital is seeking to recover has been claimed by Natahlie as part of her claim for special damages.

Witnesses Who Testified In The Medical Negligence Claim

Plaintiff's Witnesses

[29] The witnesses who testified for the plaintiff in the medical negligence claim are as follows:

(i) Dato Dr Ravindran Jegasothy: ("PW1") (Obstetrician and Gynaecologist – plaintiff's expert witness).

(ii) Elizabeth Chin Yew Kim ("PW2") (mother of Nathalie Nordberg).

(iii) Mats Nordberg ("PW3") (father of Nathalie Nordberg).

(iv) Dr Zasmani Shafiee: Child/Adolescent Psychiatrist (Penang Adventist Hospital).

(v) Dr Ajay K Sharma: Orthopaedic and Spine Surgeon ("PW5") (Gleneagles Medical Centre).

Defendant's Witnesses

[30] The witnesses who testified for the defendant in the medical negligence claim are as follows:

(i) Dr Quah Thong Sai ("DW1") (Obstetrician and Gynaecologist at Lam Wah Ee Hospital). (DW1 is the first defendant)

(ii) Dr Ho Chee Keong ("DW2") (Radiologist at Lam Wah Ee Hospital).

(iii) Dr Chua Chee Peng ("DW3") (Paediatrician and Neonatologist at Lam Wah Ee Hospital).

(iv) Dr Dhiresh Kumar Chaudhury (Consultant Orthopedic Surgeon at Penang Adventist Hospital) ("DW4").

(v) Dato' Dr Alex Mathews ("DW5") (Obstetrician and Gynaecologist – defendant's expert witness).

The Hospital's Claim

[31] Seow Peng Peng (patient's accounts manager at the hospital) (PW1) (in the hospital's claim) testified in respect of the hospital's claim. There was no challenge as to the amount that was outstanding. The only issue is whether PW2 and PW3 were liable to pay the outstanding sum despite the fact that Natahlie had a claim against DW1 and the hospital.

DW1's Medical Reports

[32] The starting point in the narrative of events is the admission of PW2 on 18 September 2000 and delivery of the baby on 19 September 2000. These are all captured in DW1's medical reports as they explain what took place on 18 and 19 September 2000. DW1 prepared two medical reports. The first report is dated 23 October 2000 (p. 1-2 Bundle Q). The first report gave a glimpse of what happened during the delivery.

[33] DW1's second report is dated 27 February 2001 (pp. 3-5 Bundle Q). It is addressed to Messrs Shearn Delamore. Presumably, DW1 had anticipated legal proceedings arising out of the delivery of the infant on 19 September 2000. The second report was a more comprehensive report and gave more details of the events that took place during delivery and the manoeuvres that were employed to deliver the child upon discovery of shoulder dystocia. I intend to refer only to the second report where he stated as follows:

On the same night (18 September 2000) at 21.35 hours, I came to see her in her room and she told me the pain was getting stronger and from the look of her facial expression, I felt that she was already in established labour.

I did a vaginal examination which showed that the os had dilated to 4cm and the presenting part was Station 2, so I told her I would like to take her into the Labour Room and to start on Pitocin Augmentation which she agreed.

Artificial rupture of membrane was carried out by my staff midwife on duty at 21.45 hours. On that night, I had 3 patients in labour (other than Ms Elizabeth Chin) and all those 3 patients had normal vaginal deliveries before her. In between these deliveries I had my rest in one of the vacant labour room in the Labour Ward (we have 8 labour rooms in the Labour Ward).

My staff midwife did the vaginal examination at 1.30 hours (19 September 2000) and I did the examination at 1.40 hours and found that the os had dilated to 8 cm and I was quite happy with the progress of labour so far. By 1.50 hours on 19 September 2000, the Staff midwife came over to my room to inform me that the patient's cervical had fully dilated and the patient already had the urge to bear down so I got myself ready and prepare for vaginal delivery.

About 15 minutes later (from the time was full) (sic) the baby's head was delivered spontaneously (without any instrumental assistance). However, the problem came when I tried to deliver the anterior shoulder. I used all the force that I could get but it still would not come out. I even instructed the Staff Midwife to apply fundal pressure and still nothing visibly happened. I even tried to use my finger to hook on the armpit of the posterior shoulder. After 3-4 minutes of trying, I finally delivered the anterior shoulder and the baby. (emphasis added)

The Evidence

[34] The plaintiff's first witness was Dato' Dr Ravindran Jegasothy ("PW1"). He had not personally examined Natahlie and his evidence was by way of opinion evidence and based on his decades of experience as Consultant O&G in the government service and based on his study of all the medical reports and medical records that were made available to him by the plaintiff's solicitors.

[35] PW1's last held position in the government service was that of Chief of O&G services for West Malaysia. He said that during his career in government service he had handled about 30 cases involving shoulder dystocia and that four of these deliveries involving shoulder dystocia ended up with the babies having some residual nerve injury but these were mild injuries which had cleared up with the passage of time.

[36] PW1's report dated 30 December 2011 (pp. 3-9 Bundle C) was scathing and highly critical of DW1's handling of the delivery. Essentially, PW1 had condemned DW1's conduct as being totally negligent. In that report, PW1 states as follows:

A case of shoulder dystocia is usually caused by the impaction of the anterior (upper) shoulder of the baby against the superior (upper) border of the symphysis pubis. This is the bone that can be felt below the pubic hair in the *supra*-pubic area of a female. The head had been grasped by the doctor in an attempt to deliver the baby. What is NOT recommended is for the doctor to "use all the force he can get" as this would simply stretch the nerves of the brachial plexus of the baby and even tear it as happened in this case. The brachial plexus is a group of nerves that run from the bones of the cervical spine (neck vertebrae) to the upper limb. Without its function, the baby will not be able to lift its arm above the shoulder or to rotate (turn) the arm.

Furthermore, it is not recommended to instruct the Staff Midwife to apply fundal pressure in a case of shoulder dystocia. Fundal pressure is to apply pressure on the top of the uterus and to attempt to force the baby out. What this manoeuvre would do in a case of shoulder dystocia would be to further impact (press) the anterior shoulder against the symphysis pubis and work against attempts to relieve the obstruction. There is no documentation of *supra*-pubic pressure being applied.

Added to this is the attempt of the doctor to hook his finger on the armpit of the posterior shoulder. He is using force and is working against the natural anatomy to deliver the posterior shoulder. He should in fact locate the posterior hand and sweep it across the chest to deliver the posterior shoulder so that the anterior shoulder falls free and the baby is then delivered.

The medical records do not document in detail what the doctor did to overcome the acute emergency of shoulder dystocia. The doctor states the difficulty took 3 - 4 minutes to overcome (page 2). The nurses state "difficult delivery of baby's shoulder" but do not state the time taken (page 20). The time of delivery of the baby is recorded as 2.03 a.m. (page 22) but the doctor states "the head was delivered about 15 minutes later (from the time was full)" (page 4). This leaves a lot of doubt in the mind as how long it took for the doctor to overcome the difficulty in delivering the shoulders after the head had been delivered.

It is unfortunate time is not recorded clearly in the notes as delay in completing the delivery may result in asphyxia and, if the interval between head and trunk delivery is prolonged, permanent neurological deficit may occur. Delivery should occur within five minutes and permanent injury would be progressively more likely with delays above ten minutes.

It is my opinion that the inappropriate methods of overcoming the shoulder dystocia used by the doctor caused the Erb's palsy and right phrenic nerve damage sustained by the infant. It is also possible that the delay in delivery of the infant caused the hypoxic-ischaemic encephalopathy sustained by the infant.

The birth weight of the infant was 4.950 grams (10Ibs 15 ozs) (page 22). This was a macrosomic infant. The doctor should have warned the patient of the possibility of a big baby and advised her on caesarean section as the mode of delivery to be considered as she also had a

previous scar. The doctor had estimated the weight to be 9lbs (4.08 kg). The difference is estimated weight and actual weight was 870 grams. This is more than the variation quoted in most literature for both clinical and ultrasound estimate of weights. There is also no records of an ultrasound estimate of weight being done in this patient where the doctor had clinically estimated the weight to be 91b (4.08 kg).

An ultrasound measurement of the abdominal circumference of the foetus could have guided him to counsel the mother appropriately with regards to mode of delivery.

Conclusion

The mother was a patient with a previous caesarean section who was pregnant within 6 months of her previous delivery. She was thought to have a large baby during her current pregnancy. There does not appear to have been any discussion with the patient or consideration of her risk factors in planning her mode of delivery by the doctor concerned.

The labour was augmented with oxytocin despite the possibility of her having adequate contractions after artificial rupture of membranes. The oxytocin infusion was not stopped when the shoulder dystocia occurred.

There is poor documentation of the time frames involved in performing the various procedures to overcome the dystocia. The doctor performed inappropriate measures of strong traction, asking for the application of fundal pressure and pulling on the posterior armpit of the infant.

There was a possible delay in performing effective infant resuscitation and this resulted in the baby arriving at the NICU in poor condition. Time frames and the status of the baby between delivery and arrival at the NICU are not available.

There was a large difference between the estimated fetal weight and the actual birth weight of the infant at delivery (21.3%).

The inappropriate methods used in overcoming shoulder dystocia resulted in the baby developing Erb's palsy and right phrenic nerve palsy as a result of the shoulder dystocia. The baby was also treated for birth asphyxia during the admission. The measures taken by the obstetrician in overcoming shoulder dystocia were not in line with what his peers would have done. The current neurological status of child needs a paediatric expert opinion.

[37] In PW1's Supplementary Medical Opinion (pp. 1-3 Bundle F) he further states that:

The doctor has stated in his letter to his solicitor dated 27th February 2001 that "the problem came when I tried to deliver the anterior shoulder. I used all the force that I could get but it still would not come out. I even instructed the staff midwife to apply fundal pressure but still nothing visibly happened. I even tried to use my finger to hook on the armpit of the posterior shoulder. After 3 - 4 minutes of trying, I finally delivered the anterior shoulder and the baby".

With regards to my opinion regarding using the finger to hook on the armpit of the posterior shoulder, this is done to access the posterior arm. This manoeuvre should be gently done and the posterior arm should be swept across the chest and face of the infant. These actions deliver the posterior arm out of the vagina (not the anterior shoulder as stated by the doctor). Once the posterior shoulder and arm is delivered, the anterior shoulder is disimpacted from behind the symphysis pubis and the baby will be delivered.

With regards to fundal pressure, I wish to quote from reference no. 5 in my original opinion. (Croft J, Draycott T, Denbow M. Cord proplapse and shoulder dystocia. In: *Best Practice in Labour and Delivery*. Warren R, Arulkumaran S (Eds.) Cambridge University Press 2010: 131-140). On page 138 of the said reference, it is stated that fundal pressure has been described as a manoeuvre in the management of shoulder dystocia; indeed fundal pressure has been described by both Woods and Rubin in their original description of internal rotational manoeuvres. However, a study in 1987 reported fundal pressure, in the absence of other manoeuvres, was associated with a 77% complication rate, including uterine rupture and brachial plexus injury to the neonate. *Therefore fundal pressure is no longer a recommended manoeuvre in the management of shoulder dystocia and should not be used*. The Royal College Guidelines on shoulder dystocia also state that "**fundal pressure should not be used during the management of shoulder dystocia**". It is associated with a high neonatal complication date and may result in uterine rupture.

Fundal pressure is not used in the management of shoulder dystocia in this country. If done, it will further impact the anterior shoulder of the fetus against the superior (upper) border of the symphysis pubis and further stretch the nerves as the doctor continues to pull on the head "with all the force he could get". It should also be noted that the doctor did not carry out any other methods of overcoming the shoulder dystocia except for pulling "with all the force he could get", instructing for fundal pressure to be applied and hooking his finger on the posterior armpit, presumably to deliver the posterior arm. These indicate that the doctor did use other methods i.e. pulling on the head and hooking his finger on the armpit of the posterior besides fundal pressure, contrary to the advice given in the scientific literature. It is my opinion that the methods used by the doctor were not the correct methods to be used to overcome the shoulder dystocia.

There is a definite risk of cerebral (brain) damage following shoulder dystocia. If severe, this can lead to long-term neurological impairment. In the reference Louca OAB, Johanson RB. Shoulder dystocia. In: *The Yearbook of Obstetrics & Gynaecology* Vol. 6 O'Brien PMS (Ed) RCOG Press, London 1998: page 73, it is stated that "following delivery of the head, the umbilical cord pH falls by 0.04 unit/minute. As a result, delay in completing the delivery may result in asphyxia and, if the interval between head and trunk delivery is prolonged, permanent neurological deficit may occur. Delivery should occur within five minutes and permanent injury is progressively more likely with delays above ten minutes".

> The infant had a right phrenic nerve palsy which led to diaphragmatic paralysis. This means that there was paralysis of the C4 segment of the brachial plexus. This cervical root is rarely involved as a complication of the manoeuvres involved in overcoming shoulder dystocia. The child also had right sided Erb's palsy. Erb's palsy indicates the involvement of the 4th to 6th cervical segments. Sometimes even this seventh cervical root may be involved. **These injuries would indicate the degree of the traction and lateral force used at delivery**. That is why I am troubled by the statement of the doctor that "**I used all the force I could get but it still would not come out.**" (emphasis added)

Summary Of PW1's Expert Opinion

[38] PW1's charge of negligence against DW1 is predicated on the following aspects of his handling or mishandling of the delivery.

(i) failed to accurately determine the baby's fetal weight.

(ii) failed to anticipate a macrosomal baby and advise PW2 to elect for delivery *via* caesarean section.

(iii) failed to place the patient in the McRobert's position and simultaneously apply *supra*-pubic pressure.

(iv) using wrong manoeuvre to hook the baby's posterior arm to disimpact the anterior shoulder.

(v) using excessive force instead of gentle traction.

(vi) using fundal pressure (which is contraindicated in shoulder dystocia).

(vii) delaying in resuscitating the baby.

McRobert's Position And *Supra*-Pubic Pressure

[39] According to the RCOG guideline, the McRobert's manoeuvre together with the application of *supra*-pubic pressure are the first line of intervention for shoulder dystocia and this usually produces a good outcome. It says:

> McRobert's manoeuvre is the single most effective intervention and should be performed first.
>
> The McRobert's manoevre (Figure 1) is flexion and abduction of the maternal hips, positioning the maternal thighs on her abdomen. It straightens the lumbo-sacral angle, rotates the maternal pelvis cephalad and is associated with an increase in uterine pressure and amplitude of contractions. *The McRobert's manoeuvre is the single most effective intervention, with reported success rates as high as 90%. It has a low rate of complication and therefore should be employed first*.
>
> *Supra*-pubic pressure is useful
>
> ***Supra*-pubic pressure can be employed together with McRobert's manoeuvre to improve success rates**. *Supra*-pubic pressure reduces the bisacromial diameter and rotates the anterior shoulder into the oblique

> pelvic diameter. The shoulder is then free to slip underneath the symphysis pubis with the aid of routine traction. External *supra*-pubic pressure is applied in a downward and lateral direction to push the posterior aspect of the anterior shoulder towards the fetal chest (Figure 2). It is advised that this is applied for 30 seconds. There is no clear difference in efficacy between continuous pressure or 'rocking' movement. (See page 20-21 Bundle C)
>
> (emphasis added)

[40] Thus, PW1 stressed that upon presentation of shoulder dystocia DW1 should have attempted delivery by placing the patient in the McRobert's position and instructing the midwife to apply *supra*-pubic pressure. He said this was not done. His conclusion is principally premised on the fact that it is neither captured in the case notes nor in the medical reports prepared by DW1.

[41] However, DW1 says otherwise. In his witness statements (DW1A and DW1B), DW1 states that the first thing he did was to attempt the McRobert's manoeuvre and apply *supra*-pubic pressure and when that failed fundal pressure was applied. It has been suggested by the plaintiff's side that the reference in DW1's witness statements to McRobert's position and application of *supra*-pubic pressure was an afterthought by DW1.

[42] Thus, whether PW2 was placed in the McRobert's position and whether *supra*-pubic pressure was applied was a highly contentious issue. As such, in order to test the veracity of DW1's stand that he placed PW2 in the McRobert's position and applied *supra*-pubic pressure, PW2 was shown the diagram for the McRobert's position (p. 4 of 13 RCOG Guideline at p. 19 Bundle C) and was asked whether she was placed in that position during delivery. She said that she could not see what was going on but confirmed that the nurse applied pressure to the upper part of her abdomen (fundal pressure). She said that her knees were not flexed to her chest which is the McRobert's position. Essentially, PW2's answer was that she was never placed in the McRobert's position.

[43] Further, PW3 (Mats Nordberg) was asked to corroborate PW2's evidence and he said that he was in the delivery room and he too confirmed that his wife (PW2) was not placed in the McRobert's position. He was shown the diagram for the McRobert's manoeuvre which is illustrated in p. 4 of 13 of RCOG guideline (p. 19 Bundle C) and he said that he does not remember seeing his wife being placed in that position.

[44] For the moment, I will leave aside the factual dispute on the McRobert's position and *supra*-pubic pressure. What is indisputable and comes out clearly from the evidence of the two experts, namely PW1 and DW5 is that the plaintiff's expert (PW1) predicates his opinion on the basis that DW1 did not attempt the McRobert's manoeuvre whereas the defendant's expert (DW5) assumes that DW1 did attempt the manoeuvre.

[45] What is also clear from the evidence and opinion of both experts is that McRobert's manoeuvre and *supra*-pubic pressure are both critical procedures which must be undertaken as soon as shoulder dystocia is presented and failure to undertake that manoeuvre is a manifestation of negligence on the part of the O&G.

[46] Hence, it is pre-eminently a question of fact whether DW1 had undertaken the McRobert's manoeuvre and applied *supra*-pubic pressure. My findings on whether DW1 had placed PW2 in the McRobert's position and whether *supra*-pubic pressure was applied are dealt with in the later part of the judgment.

Natahlie's Residual Injuries

[47] Dr Zasmani Shafiee (Consultant Child and Adolescent Psychiatrist) ("PW4") examined Natahlie and rendered the following report on the psychological aspects of her condition. In her psychological report dated 26 June 2010 (pp. 35-36 Bundle B) she said:

Conclusion

1. The behaviours observed are consistent with reports from mother, and findings in my clinic assessment on 17.05.2010.
2. The Conners' Parents Rating Scale CPRS and Conners' Teachers Rating Scale CTRS both showed high scores for ADHD.
3. Natahlie does have problems of inattention and hyperactivity seen in all situations.
4. Her right arm weakness, and deformity has affected her both socially and emotionally. In her late pre-adolescent years, it is understandable she has become more aware of her physical looks and abilities. She tries to conceal her disability, but it has caused her embarrassments in public. The disability has also affected her peer relationship.
5. Additionally, she has specific difficulties in learning, particularly in Mathematics, which requires further evaluation and confirmation through an IQ test.

Diagnosis

1. Attention Deficit Hyperactivity Disorder (ADHD).
2. Specific learning difficulty (to be confirmed with IQ testing).
3. Socio-emotional difficulties secondary to disability.
4. Right shoulder dystocia.

Treatment and recommendations

1. IQ testing to confirm co-morbid specific learning difficulty.
2. Medication and behaviour therapy to treat ADHD.

A

3. Counselling to help with acceptance of and increase the skills to cope with having a disability.

4. Psycho-education to school to help them understand child's needs.

5. Support to family.

B **[48]** The plaintiff's last witness was Dr Ajay Sharma (Consultant Orthopaedic and Spine Surgeon) ("PW5") and in his report dated 10 May 2010 (p. 30-32 Bundle B), he said:

Present complaints:

C (1) Unable to lift her right upper limb;

(2) Poor right hand grip function;

(3) Shortened right upper limb;

(4) Small looking right upper limb;

D (5) Suffers from low self-esteem, embarrassing episodes from school mates and depression.

Radiological Examination:

An MRI of the cervical spine, brachial plexus and brain was done on 20/4/2010.

E Brain MRI showed bilateral periventricular white matter suggestive of demyelinating disease.

MRI of cervical and brachial plexus revealed a pseudomeningocele at right C7 nerve root. These features could represent traction injury to the upper root of brachial plexus during birth as in cases of shoulder dystocia.

F Discussion:

Ms Natahlie is a young and bright girl with a great future ahead of her. However, due to her birth injury, she has depression, prefers to shy away from her friends for fear of being embarrass due to her disability. She has permanent complete loss of right shoulder abduction (unable to G raise her right shoulder). She also has permanent fixed flexion deformity of her right elbow at 35 degrees and complete loss of right wrist extension. This disability will result in Ms Natahlie not be able to do any overhead activity like bringing down books from shelves or dressing and undressing independently. She will also not be able to independently take care of her basic needs like bathing, showering and H basic toilet care.

At the moment, she uses her left hand for all her needs but with extreme difficulty which makes her work very slow.

Her inability to extend her right wrist means that her grip will be affected I in doing things like properly holding a glass of water or holding a plate of food or picking a phone up.

She has weak right elbow extensor which affects her ability to fully straighten her elbow. This will affect her during dressing and undressing independently.

Her impaired sensation of light touch to her right upper limb renders her prone to develop pressure ulcer and superficial accidental burns.

Her shortened right upper limb of 18.5cm makes it impossible for her to ever drive a motorbike or car in the future.

She does not have the ability to play racket games, knitting, doing stitch craft, playing musical instruments which girls love to do due to her disability.

[49] In a radiologist report dated 28 September 2000, Dr Lee Cheng Hock (radiologist) (who did not testify) made the following observations:

ULTRASOUND ABDOMEN

The liver is not enlarged. Normal homogehous echo pattern is present.

No space occupying lesion is seen.

No infra or extrahepatic bile duct dilatation is seen.

Normal gallbladder wall thickness. No gallstones are seen. The common bile duct is not dilated.

No pancreatic mass is detected.

Spleen is not enlarged. Normal homogenous echo pattern is present. NO space occupying lesion is seen.

Both kidneys are normal size, shape and echo pattern. There is well defined normoechogenic lesion with hypoechogenic areas superior to both kidneys.

No ascites.

Both diaphragms show downward movement with inspiration.

CONCLUSION: Bilateral adrenal hemorrhage. (See page 130 Bundle B)

[50] Dr Ho Chee Keong (radiologist) (DW4) in his radiology report dated 5 October 2000 said:

X-Ray Report - Natahlie (5/10/2000)

FLUOROSCOPY SCANNING OF THE DIAPHRAGM

There is completely no movement of right hemi-diaphragm during inspiration, suggestive of right phrenic nerve paralysis. (See page 28 Bundle B)

[51] In a report dated 30 October 2000, Dr Lee Cheng Hock (radiologist) had reported the following:

FLUOROSCOPY

There remains paradoxical movement of the right hemi-diaphragm suggestive of right phenic nerve palsy. (See page 29 Bundle B)

[52] Then, in a report by Dr Ho Chee Keong (radiologist) which is dated 13 November 2000, it is stated that:

> MRI BRAIN
>
> Transaxial T1 weighted, T2 weighted and FLAIR sequences, coronal T2 weighted and sagittal T1 weighted sequences of the brain performed.
>
> FINDINGS
>
> There is diffuse mild to moderate global cerebral atrophy. The inter-hemispheric fissure, Sylvian's fissures, sulci and basal cisterns are prominent. The lateral, third and fourth ventricles are mildly enlarged.
>
> There are multiple small areas of cystic necrosis noted in periventricular region of the lateral ventricles in frontal, parietal and occipital lobes. Similar area of cystic necrosis also noted in right lentiform nucleus.
>
> These areas of cystic necrosis measured approx, 0.4 to 0.6cm each. Normal gray white matter pattern consistent with patient's age noted. The globes and retro-orbital spaces appeared normal.
>
> IMPRESSION
>
> In view of the clinical history, features are consistent with late findings of anoxic-ischemic to the brain. (See page 26 - 27 Bundle B)

[53] Dr Chua Chee Peng (DW3) (Consultant Neonatologist and Paediatrician at the hospital) ("DW3") in his report dated 30 October 2000 states the following:

> This baby was delivered by spontaneous vertex delivery at 0230 hours on 19 September 2000. It was a difficult and prolonged delivery as the baby was big (birth weight of 4.95kg) and there was also shoulder dystocia.
>
> The Apgar Score was 4/4 at 1 minute and 5 minutes. She had to be intubated and bagged with oxygen in the Labour Room. She was immediately transferred to the NICU.
>
> In the Nursery, the baby was cyanosed and gasping. She has to be resuscitated, reintubated and mechanically ventilated. She exhibited signs of Hypoxic Encephalopathy like fits, apnoea, cycling movements of limbs, starring gaze and inability to suck or swallow. Birth Trauma was manifested by a Right Erb's Palsy and also a Right Phrenic Nerve Paralysis due to Brachial Plexus Injury. In addition, she was found to have a bilateral adrenal haemorrhage as well as a hypoxic gut with transient illeus. A clinical diagnosis of Birth Trauma with Asphyxia was entertained.
>
> Meantime, her cerebral functions improved. She is now alert, cries and able to suck orally as well as tolerate breastmilk. She has no convulsion and no other obvious neurological deficit except for her right Erb's palsy. She should be able to be discharged soon after the right diaphragm has been plicated. (See page 45 - 46 Bundle Q)

Defendant's Expert (DW5)

[54] On the issue of predictability of shoulder dystocia and the decision to allow for vaginal delivery, Dato' Dr Alex Mathews (DW5) (as per his witness statement – DW5A) said that shoulder dystocia in the present case was not predictable and that delivery *via* caesarean section was not indicated. He said that there was no negligence on the part of DW1 in the delivery of the baby.

[55] These are DW5's answers to the questions posed in his witness statement on the issue of predictability of shoulder dystocia and caesarean section:

Q14. Is shoulder dystocia a predictable incident?

A. No, shoulder dystocia is usually unpredictable although there are several risk factors related to shoulder dystocia, eg diabetic pregnant women, abnormal pelvic anatomy, estimated fetal weight more than 4500g (9Ib 15oz) and protracted active phase of first-stage labour and protracted second-stage labour.

Q15. Given the circumstances prior to the delivery in issue, could the 1st Defendant have reliably predicted the occurrence of shoulder dystocia?

A. No. The 1st Defendant would not have been able to reliably predict the of shoulder dystocia for the following reasons:

(i) Madam Chin does not have an abnormal pelvic anatomy;

(ii) The fetal weight was estimated to be about 9 pounds during the antenatal-consultation on 13.9.2000 when Madam Chin was in her 39th week of pregnancy (estimated delivery date of 21.9.2000); and

(iii) The progress of labour was satisfactory and not prolonged.

Q16. Given Madam Chin's delivery history and antenatal records, was it proper for the 1st Defendant to have allowed a vaginal delivery?

A. Yes. It was an acceptable decision because of the following:

(i) that throughout the antenatal consultations, there were no indications to suggest that the delivery in issue would have to be by way of Caesarean section, i.e. there were no adverse medical factors like high blood pressure, and the fetal condition and position was normal;

(ii) during the ante-natal consultation on 13.9.2000 when Madam Chin was in her 39th week of pregnancy, the vaginal examination by the 1st Defendant showed cervix dilatation of 2cm;

(iii) that the estimated fetal weight did not accede 4.5kg;

A (iv) that Caesarean section, which is an alternative to vaginal delivery, is not without its risks. It is a surgical procedure with a significant number of short and long term risks including an increased risk of uterine rupture in a subsequent pregnancy.

[56] DW5 also testified on the issue as to whether DW1 was negligent
B in his handling of the delivery. These are his answers to the questions that were posed.

Q17. In your opinion, was the brachial plexus injury at the Plaintiff's right arm caused by the 1st Defendant's negligence in the conduct and management of the delivery in issue?

C A. No. Brachial plexus injury is a common complication of shoulder dystocia, which, as I have stated earlier, is usually an unpredictable occurrence. The 1st Defendant had managed the delivery swiftly upon encountering difficulty in the delivery of the anterior shoulder of the baby after it got impacted on Madam Chin's pubic bone. The baby was delivered soon after (3 to 4 mins later), and
D that the 1st Defendant immediately intubated and resuscitated the baby.

It is pertinent to note that if the baby had not been delivered promptly and appropriately given the circumstances, the lives of both the mother and the baby would have been greatly
E endangered. In such a situation, the baby would have suffered from severe deprivation of oxygen resulting in permanent brain damage or even death, and that the mother would have suffered injuries.

Q18. Is there a want of care and skill on the part of the 1st Defendant
F in the post-natal management of the Plaintiff?

A. No. The 1st Defendant had acted promptly in intubating and resuscitating the baby immediately upon delivery. Dr Chua Chee Peng, a Consultation Paediatrician at the Hospital then took over further resuscitation, management and treatment of the Plaintiff

G Q19. Given the account of the circumstances, in your opinion, was the 1st Defendant's management and conduct of the delivery in issue in accordance with the acceptable standard of care?

A. Yes. It is my considered view that the 1st Defendant had properly exercised his professional judgment in allowing Madam Chin to
H deliver vaginally.

The fact that the delivery of the baby, despite the shoulder dystocia, was rapid and immediate effective resuscitative attempts were made do confirm that Madam Chin and the baby were managed well by Dr Quah at all important clinical moments. All possible measures had been taken to avoid a more severe and
I adverse outcome.

[57] As for the infant's orthopaedic injuries, Dr Ajay Sharma (PW5) painted a bleak picture in so far as Natahlie's right hand is concerned. As a response to Dr Ajay Sharma's orthopaedic assessment of Natahlie, DW1 introduced the evidence of Dr Dhiresh Kumar Chaudhury (Consultant Orthopaedic Surgeon of Penang Adventist Hospital) (DW4) who examined Natahlie on 7 December 2010 which was about seven months after she was examined by Dr Ajay Sharma. In his report dated, 24 March 2011, DW4 said:

> Miss Natahlie Nordberg appeared to me to be a bright young girl fully responsive to all questions put to her.
>
> Unfortunately due to the Birth Trauma (of a Right Brachial Palsy) she has certain permanent deformities to her Right upper limb. These include the following:
>
> (i) Permanent loss of Active Right shoulder abduction (i.e. inability to raise her right shoulder).
>
> (ii) Permanent Fixed Flexion Deformity of her Right Elbow joint at 40° (approximately).
>
> (iii) Complete loss of Active Right Wrist extension.
>
> (iv) Shortening of her Right Upper limb.
>
> (v) Weakness of her right upper limb.
>
> The above disabilities will obviously prevent her from doing any overhead activities and free use of her right upper limb and this will obviously prevent her from several activities.
>
> I could not elicitate any loss of sensation in her right upper limb.
>
> Her shortening of the right upper limb was measured at approximately 5cm, and this is in variance to that of Dr Ajay Sharma. This could possibly be explained by the fact that there is a time difference of 7 months between his and my examination of Natahlie.
>
> School activities: She does not like to go to school as she does not like her teacher.
>
> Her ambition: To become a teacher.
>
> As regards her mental ability, I did find her to be a bright young girl. She was initially a bit quiet but on questioning she did open up and was quite responsive to all my questions, and (in my opinion) was a normal young girl quite in keeping with any average 10 years old. (See page 130 Bundle Q)

[58] In his witness statement (DW4B), he said that in spite of her disabilities, Natahlie could still use her right hand to some extent. I have reproduced DW4's answers to Q2 and Q3 in DW4B.

> Q2. Considering your finding that her left upper limb is normal and that her wrist and fingers have full range of flexion and full range of active motion respectively, would you say that her ability to lead a normal life has been compromised?

A

Except for any overhead activities which would require as well the function of the right shoulder and the right upper limb, her ability to lead a normal life has not been compromised.

The fact that her left upper limb is normal and that both her left and right wrists and fingers have full range of flexion and full range of active motion means that Natahlie Nordberg is able to handle gadgets, such as handphone and computer, and engage in activities requiring the use of both hands.

B

Q3. In your personal experience, or having regard to case studies or medical literature, would a person having brachial plexus injury be able to lead a normal life?

C

A. Yes. Everything depends on the person concerned and it is up to the person to decide for himself or herself what life he or she chooses.

There have been cases of persons having brachial-plexus injury leading a full and normal life, attending to their basic needs independently, pursuing a full time career, engaging in outdoor sports and games, playing musical instruments and the like.

D

The Law: Standard Of Care

[59] The law pertaining to the standard of care that is expected of a medical doctor was authoritatively examined by the Federal Court in *Foo Fio Na v. Dr Soo Fook Mun & Anor* [2007] 1 CLJ 229; [2007] 1 MLJ 593, where the court departed from the test enunciated in *Bolam v. Friern Hospital Management Committee* [1957] 1 WLR 582. Hitherto the test or the standard for determining whether the conduct of the doctor was negligent or not was enshrined in the following remarks made by Justice McNair in that case:

E

F

> But where you get a situation which involves the use of some special skill or competence, then the test whether there has been negligence or not is not the test of the man on the top of a Clapham omnibus, because he has not got this special skill. The test is the standard of the ordinary skilled man exercising and professing to have that special skill.
>
> A doctor is not guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible body of medical men skilled in that medical act ... Putting it the other way round, *a doctor is not negligent, if he is acting in accordance with such practice, merely because there is a body of opinion that takes a contrary view*. (emphasis added)

G

H

[60] In *Hucks v. Cole* [1968] 112 SJ 483, Lord Denning described the standard of care as follows:

> A doctor was not to be held negligent simply because something went wrong. He was not liable for mischance or misadventure, nor for error of judgment. *He was only liable if he fell below the standards of a reasonable competent practitioner in his field, so much so that his conduct was deserving of censure or inexcusable*.
>
> [emphasis added]

I

[61] In *Rogers v. Whitaker* [1992] 175 CLR 479, the High Court of Australia debunked the *Bolam* principle and made the following pronouncements: A

> In Australia, it has been accepted that the standard of care to be observed by a person with some special skill or competence is that of the ordinary skilled person exercising and professing to have that special skill. But, that standard is not determined solely or even primarily by reference to the practice followed or supported by a responsible body of opinion in the relevant profession or trade. Even in the sphere of diagnosis and treatment, the heartland of the skilled medical practitioner, the *Bolam* Principle has not always been applied. Further, and more importantly, particularly in the field of non-disclosure of risk and the provision of advice and information, the *Bolam* Principle has been discarded and, instead, the courts have adopted the principle that, while evidence of acceptable medical practice is a useful guide for the courts, it is for the courts to adjudicate on what is the appropriate standard of care after giving weight to the paramount consideration that a person is entitled to make his own decisions about his life. B C D

[62] In *Bolitho v. City and Hackney Health Authority* [1997] 4 All ER 771, the House of Lords made inroads into the *Bolam* principle and the seismic shift in jurisprudential thinking came with the Lord Browne-Wilkinson who delivered one of the judgments where he expressed his findings at p. 778 of the report as follows: E

> ... In my view the court is not bound to hold that a defendant doctor escapes liability for negligent treatment or diagnosis just because he leads evidence from a number of medical experts who are genuinely of opinion that the defendant's treatment or diagnosis accorded with sound medical practice ... In particular, in cases involving, as they so often do, the weighing of risks against benefits, the judge before accepting a body of opinion as being responsible, reasonable or respectable, will need to be satisfied that, in forming their views, the experts have directed their minds to the question of comparative risks and benefits and have reached a defensible conclusion on the matter. F G
>
> These decisions demonstrate that in cases of diagnosis and treatment there are cases where, despite a body of professional opinion sanctioning the defendant's conduct, the defendant can properly be held liable for negligence (I am not here considering questions of disclosure of risk). In my judgment that is because, in some cases, it cannot be demonstrated to the judge's satisfaction that the body of opinion relied on is reasonable or responsible. In the vast majority of cases the fact that distinguished experts in the field are of a particular opinion will demonstrate the reasonableness of that opinion. In particular, where there are questions of assessment of the relative risks and benefits of adopting a particular medical practice, a reasonable view necessarily presupposes that the relative risks and benefits have been weighed by the experts in forming their opinions. But if, in a rare case, it can be H I

A demonstrated that the professional opinion is not capable of withstanding logical analysis, the judge is entitled to hold that the body of opinion is not reasonable or responsible.

[63] The above passages in the *Bolitho* case led the Federal Court in *Foo Fio Na* to conclude that "*Bolitho* decided that if it can be shown that the B professional opinion relied upon was not capable of withstanding logical analysis, the judge is entitled to hold that the body of opinion was not reasonable or responsible" (ie para. 46 of the judgment of the Federal Court). As such, following *Foo Fio Na*, the position is that the court is not bound to accept the opinion of medical opinion which supports the conduct C of the doctor who is facing a charge of negligence if it can be shown that the opinion is not predicated on a logical analysis. In those circumstances, the court is entitled to reject it as being neither reasonable nor responsible.

Findings (Liability)

Fetal Weight And Predictability Of Shoulder Dystocia

D

[64] The baby's weight at birth was 4,950g (10Ibs 15 ozs) whereas the clinically estimated weight on PW2's last antenatal visit was 9lbs (4,150g)(p. 52 Bundle B). In this regard, PW1 took the view that DW1 was way off the mark in his estimation and that he should have conducted a E weight estimation *via* ultrasound examination instead of clinical estimation. He said that an ultrasound examination would have given an accurate estimation of the baby's weight which in turn would have informed DW1 that the baby was macrosomic and therefore advised PW2 to elect for delivery *via* caesarean section rather than per vaginal delivery.

F **Fetal Weight**

[65] On the issue of estimation of the baby's weight, it was suggested by counsel for the plaintiff that DW1 should have undertaken an ultra-sonographic measurement of the baby's abdominal and cephalic circumference so as to obtain an accurate measurement of the size of the G baby and a more reliable estimation of the baby's weight. However, I note that the RCOG guideline acknowledges that ... "clinical fetal weight estimation is unreliable and third trimester ultrasound scans have at least 10% margin for error for actual birth weight and a sensitivity of just 60% for macrosomia (over 4.5kg) (See para. 4.1 RCOG guideline at p. 17 Bundle H C).

[66] In his witness statement (DW1B, QA21 p. 8), DW1 said "the occurrence of shoulder dystocia which had led to the brachial plexus injury was a highly unpredictable incident". In his witness statement (DW5A, QA14 p. 5), DW5 said "shoulder dystocia is usually unpredictable although I there are several risk factors related to shoulder dystocia, eg diabetic pregnant women, abnormal pelvic anatomy, estimated fetal weight more than 4,500g (91b 15oz) and protracted active phase of first-stage labour and protracted second-stage labour".

[67] DW5 further states in his witness statement (DW5A, QA15 p. 5), that "Dr Quah (DW1) would not have been able to reliably predict the occurrence of shoulder dystocia", and this is predicated on the fact that PW2 did not have an abnormal pelvic anatomy, the estimated fetal weight was about 9 pounds in her 39th week of pregnancy, and the satisfactory progress of the labour itself.

[68] When addressing the estimated fetal weight *vis-a-vis* the risk of uterine rupture, DW5 had stated (DW5B, QA 9 at p. 6) that "the estimated fetal weight of about nine pounds during the antenatal consultation on 13 September 2000, is a relative risk factor but again not an absolute contra-indication".

[69] In this regard, the RCOG Guideline (Bundle Q, p. 101) on the prediction of shoulder dystocia in macrosomic babies states as follows:

> A number of antenatal and intrapartum characteristics have been reported to be associated with shoulder dystocia. There is a relationship between fetal size and shoulder dystocia but it is not a good predictor. The large majority of infants with a birth weight of .4500g do not develop shoulder dystocia and, equally importantly, 48% of incidences of shoulder dystocia occur in infants with a birth weight less than 4000g.

[70] In this case, it is clear that during the antenatal check up on 13 September 2000, DW1 had made a clinical assessment of fetal weight at 9lbs. The question is whether it was negligent for DW1 not to have done an ultrasound examination of the baby and to make a more accurate determination of the baby's size and weight which would have led him to make an informed decision as to whether PW2 should be advised to elect for delivery *via* caesarian section instead of per vaginal delivery. On this score, DW5's evidence was that even with an ultrasound examination, the O&G is not likely to get an accurate weight of the baby and that at best, it would be an estimate.

[71] In any event, given that the RCOG guideline itself acknowledges that the majority of macrosomic babies do not end up with shoulder dystocia, the question is whether a determination of the baby's weight would have altered the course of the delivery such that the baby would have not suffered the injuries which are now the subject matter of the claim.

[72] On the issue of determination of fetal weight, I am not in agreement with the opinion advanced by PW1 who steadfastly maintains that fetal weight should and could have been accurately estimated. My conclusion in this regard is supported by the medical literature that was presented to the court. In this regard, I refer to p. 274 (Chapter 13) of the book on "*Labor and Delivery Care – A Practical Guide*" which states that, "Moreover some of the most important risk factors cannot be known prior to delivery. High birth weight, for instance, has a very strong association with shoulder dystocia and brachial plexus injury; but our ability to predict birth weight in large fetuses, every using ultrasonographic imaging, is quite limited."

[73] Also, I note that "*The Yearbook of Obstetrics and Gynaecology* vol. 6 (1998)" published by the RCOG, states that "The majority of instances of shoulder dystocia (89%) occurred in babies weighing less than 4.087 (kg) (Morrison et al 1992). In this retrospective review, only 11% had risk factors for macrosomia or shoulder dystocia and among these none was identified prospectively. The antenatal detection of macrosomia is notoriously difficult ..." (See p. 75).

[74] As the name suggests, fetal weight is only an estimation and a clinical judgment by DW1 as to fetal weight (9 Ibs) cannot in my view be taken a negligence on his part. Further even if DW1 had determined fetal weight to be more than 4500g, the medical literature and DW5's expert opinion supports the view that he would have been entitled to assume that a marcosomal baby may not present shoulder dystocia.

[75] Indeed, in the *Best Practice in Labor Ward Management* (exh. R2) (published in 2000) it is stated under the paragraph on predictability of maternal risk factors for macrosomia and shoulder dystocia that, "Although a large fetus is most often suspected in shoulder dystocia, in reality almost half of all shoulder dystocia occur in the fetus weighing less than 4,000g. This fact alone highlights the unpredictability of a shoulder dystocia." Hence, I am impelled to the view that even if fetal weight was erroneously estimated by DW1, the failure to predict shoulder dystocia based on fetal size or weight is not a manifestation of negligence.

Delivery *Via* Caesarean Section

[76] Counsel for the plaintiff posed DW5 with questions during cross-examination which suggested that the birth trauma injuries could have been prevented had DW1 advised PW2 to opt for caesarian section.

[77] In my view, that line of questioning is rather too simplistic and convenient and ignores the reality that caesarean section itself is not without risks and that even a small percentage of babies delivered *via* caesarean section have had Erb's palsy. Also, the medical literature suggests that elective caesarian based on suspected macrosomic baby is not recommended unless there are other risk factors such as diabetes.

[78] In this regard, I refer to Guideline No. 42 of the Royal College of Obstetricians and Gynaecologists (Bundle Q, p. 102) which deals with elective caesarean section for suspected fetal macrosomia, ie large baby. It states that "Elective caesarean section is not recommended for suspected fetal macrosomia (estimated fetal weight over 4.5kg) without diabetes. Estimation of fetal weight is unreliable and the large majority or macrosomic infants do not experience shoulder dystocia".

[79] At the end of the day, I am of the view that there was no clear medical evidence to sustain a charge of negligence based on DW1's so-called failure to accurately estimate the weight of the baby and the failure

to advise PW2 to opt for caesarean section. In my view, even if DW1 had properly determined the baby's weight, a decision on his part to allow PW2 to deliver per vaginal is not to be equated with negligence on his part as there is no clear medical evidence that a macrosomic baby will present shoulder dystocia. In fact, medical literature supports the theory that a macrosomic baby need not necessarily present shoulder dystocia.

Oxytocin

[80] In this case, PW1's opinion was that oxytocin which is used to induce labour and cause the uterine contractions to get stronger appeared to have been continued *via* intravenous drip even after shoulder dystocia was discovered, whereas DW1 had already ascertained that PW2's uterine contractions were already strong and oxytocin should have been stopped. According to PW1, when shoulder dystocia is discovered, the patient should be told to stop "pushing" as that would cause the impacted shoulder to be more impacted. PW1 says that there is nothing in the medical paper trail to suggest that oxytocin was stopped and/or that PW2 was told to stop pushing.

[81] In rebuttal, DW5 opined that this is not significant. He said, "Maintaining or stopping the oxytocin infusion once the mother is into her last stage of labour is not material as the contractions at the time of delivery were as one would expect in a normal labouring patient. There is no evidence that the oxytocin did aggravate the shoulder dystocia." (See QA 11 DW5).

[82] In my view, the failure to stop oxytocin and/or to advise PW2 to stop pushing cannot be regarded as negligent conduct as there was no proof that these had contributed to or aggravated the shoulder dystocia. As such, I am not inclined to accept PW1's view on this score.

Delayed Resuscitation Of The Baby

[83] PW1 had opined that "there was a possible delay in performing effective infant resuscitation and this resulted in the baby arriving at the N1CU in poor condition" (Bundle C, p. 9). In response, DW5 had in his supplementary witness statement (DW5B, QA14 p. 9) said as follows:

> There is no evidence for the conclusion. In fact I would say that Dr Quah (DW1) handled the situation very well. Leaving the midwife to attend to the mother (PW2), Dr Quah (DW1) undertook immediate resuscitation, i.e., sucking and cleaning the mouth and airway, intubating the baby, inflating the lungs intermittently with oxygen and continuing pumping the baby, until the Hospital's paediatrician took over the resuscitation. Intubation is a delicate specialized procedure. [DW5B, QA14 page 9]
>
> I do not think that the place where Dr Quah (DW1) had attended to the baby in his resuscitation efforts is at all pertinent. The important

A thing to note is that without the resuscitation efforts on the part of Dr Quah (DW1), the baby could have suffered irreversible brain damage before the arrival of the paediatrician. [DW5B, QA14 page 9]

[84] Further, DW5 had said in his witness statement (DW5A, QA17 p. 7) that DW1, "had managed the delivery swiftly upon encountering B difficulty in the delivery of the anterior shoulder of the baby after it got impacted on Madam Chin (PW-2)'s pubic bone. The baby was delivered soon after (3 to 4 mins later), and that Dr Quah (DWI) had immediately intubated and resuscitated the baby".

[85] At the end of the day, I do not think that DW1 had delayed in his C attempt at resuscitating the baby. Of course, she was in a poor condition at birth with an APGAR score of four at one minute after birth and five minutes after birth. The possibility of a delay in resuscitating the baby is attributed by PW1 to the poor documentation in the case notes as to the time taken to resuscitate the baby.

D **[86]** In this regard, even DW5 accepts that DW1 is guilty of poor documentation but that of itself cannot be the basis for the charge of negligence predicted on a delay in resuscitating the baby. By all accounts, it appears that DW1 had done an impeccable job of resuscitating the baby who had to be re-intubated. Counsel for the plaintiff tried to suggest that E the fact that the baby had to be re-intubated by DW3 meant that DW1 was negligent in intubating the baby.

[87] DW3 explained that DW1's intubation did not fit properly and so he had to re-intubate the baby. Surely DW1 cannot be held to be negligent merely because the intubation needed re-adjustment. This happens all the F time and every allowance has to be given for the vicissitude and dynamics of the labour room particularly in an emergency situation such as shoulder dystocia where the baby could have died. I agree with DW5 who said it was only because of DW1's quick efforts that the baby did not die and did not suffer more serious cerebral injury.

G **Fundal Pressure And Use Of Force**

[88] PW1 said that the use of fundal pressure is absolutely contra-indicated in shoulder dystocia as that would only cause the baby's impacted shoulder to get more impacted. Thus, he said that he does not understand H how fundal pressure could be applied in such a situation. On the topic of fundal pressure, it is true that the RCOG guideline stipulates that fundal pressure ought not to be used as it would complicate the shoulder dystocia.

[89] In this regard, DW5 said that as far as he is aware, the use of fundal pressure as one of the delivery manoeuvres for shoulder dystocia was I acceptable at that time when the baby was delivered (in 2000). He said that with the passage of time the practice of fundal pressure was discontinued for shoulder dystocia situations.

[90] And so the reference to the RCOG guideline (published in 2005) which recommends that "fundal pressure should not be used for the treatment of shoulder dystocial see p. 104 Bundle Q) must be read with caution and DW1 cannot be tested against professional benchmarks which were established later in point of time. In this regard, it would be apt to refer to Lord Denning's judgment in *Roe v. Minister of Health* [1954] 2 WLR 915 on the hazards and unpredictability of medical practice. He said:

> It is so easy to be wise after the event and to condemn as negligence that which was only a misadventure. We ought always to be on our guard against, especially in cases against hospitals and doctors, Medical science has conferred great benefits on mankind, but these benefits are attended by considerable risks. Every surgical operation is attended by risks. We cannot take the benefits without taking the risk. Every advance in technique is also attended by risk. Doctors like the rest of us, have to learn by experience; and experience often teaches in a hard way. Something goes wrong and shows up a weakness, and then it is put right. That is what happened here.

[91] In the same case, Morris LJ said that "a doctor must be judged by the professional standards as were applicable at the time of the event complained of and that subsequently acquired knowledge cannot be used to retrospectively impugn the doctor's conduct as negligence. He continued in his judgment by saying, "But care has to be exercised to ensure that conduct in 1947 is only judged in the light of knowledge which there was or ought reasonably to have been possessed. In this connection, the then existing state of medical literature must be had in mind."

[92] In this regard, DW5's evidence to the effect that in 2000, it was acceptable to use "fundal pressure" was not credibly challenged in cross-examination. However, I have since looked more closely at the literature and found that in the RCOG yearbook (vol. 6, 1998, p. 79), it is stated that "strong traction" and "fundal pressure" must be avoided. It reads as follows:

> Moderate traction and *supra*-pubic pressure
>
> *Supra*-pubic pressure is applied to adduct and internally rotate the anterior shoulder (and thus reduce the bisachromal diameter) and to push the anterior shoulder underneath the symphysis pubis (Lurie et al. 1994). It is important to know where the fetal back lies so that pressure is applied in the right direction. At this stage only moderate traction is applied; strong traction as well as fundal pressure must be avoided. Baskett and Allen (1995) stated that increased traction in the head was associated with the greatest degree of neonatal trauma. Gross et al. 19876) warned against fundal pressure. Strong pushing may have similar effects and we recommended that maternal efforts should be discouraged as these could increase the impaction of the shoulders and increase the neurological and orthopaedic complications.

[93] In my view, during cross-examination, counsel for the plaintiff ought to have confronted DW5 with this passage and asked him to explain whether in light of the RCOG recommendation in 1998, it was appropriate for DW1 to use "fundal pressure" in 2000. Since DW5 was not asked to explain his answer with reference to the RCOG (1998) recommendation, I have no choice but to give little weight to the literature which appeared in the RCOG yearbook and to assume that in 2000, "fundal pressure" had not yet been totally contraindicated for shoulder dysctocia.

[94] And so, on the issue of application of fundal pressure, I am inclined to accept the view advanced by DW5 who said that in 2000, when the baby was delivered, it was still acceptable for fundal pressure to be used as one of the manouevres for shoulder dystocia. Of course, to be fair to PW1, he did refer to some studies done even before 2000, which highlighted the risks of using fundal pressure, but those are just studies, which, as DW5 had rightly pointed out had not been accepted as a firm benchmark by the O&G fraternity in general and the RCOG in particular.

[95] Hence, it is my finding that the use of fundal pressure on PW2 during delivery in 2000 as a response to shoulder dystocia was not evidence of negligence on the part of DW1. In my view, it would be wrong as matter of legal principle to use a RCOG guideline issued in 2005 to impugn the conduct of DW1 in using fundal pressure as being negligent.

[96] As for the RCOG yearbook (1998), I am not prepared to place it on the same footing as the 2005 RCOG guideline. At best, it is a caution to the O&G as to the risk of using fundal pressure.

[97] As I mentioned in the earlier part of this judgment, DW1 was indeed faced with a medical emergency and had to take steps very quickly to prevent serious injury or death to the baby and the mother. In those circumstances, it is said that a medical practitioner should not be judged to critically and allowance should be given for things that are done incorrectly.

[98] In this regard reference may be made to the judgment of Mustill L J in *Wilsher v. Essex Area Health Authority* [1987] QB 730, where he said:

> full allowance must be made for the fact that certain aspects of treatment may have to be carried out in what one witness ... called 'battle conditions'. An emergency may overburden the available resources, and, if an individual is forced by circumstances to do too many things at once, the fact that he does one of them incorrectly should not lightly be taken as negligence.

[99] On the use of force, DW1 had stated in his medical report that he used "all the force that I could get but it would still not come out ..." The question is whether he used excessive force. PW1 opines that looking at all the injuries sustained by the baby, it may be reasonably inferred that excessive force or traction was used by DW1 when in fact what he should be suing is gentle force. According to PW1, what is required is gentle traction in the right direction and not force.

[100] He said that looking at the injuries that Natahlie had suffered, involving not just the nerves to the shoulder but also other nerves, a deduction may be made that considerable force was used which damaged not just the brachial plexus nerves but other associated nerves as well. Ultimately, the question is whether the force used by DW1 was excessive. In this regard, whilst PW1 asserts that DW1 was negligent in using excessive force, it is also important to note that the RCOG guideline recognises that the injuries associated with shoulder dystocia may not be due to excessive force. In this regard, the RCOG guideline states that:

> Not all injuries are due to excess traction by the accoucheur and there is now significant body of evidence that maternal propulsive force may contribute to some of these injuries. Moreover, a substantial minority of brachial plexus injuries are not associated with clinically evident shoulder dystocia. In one series, 4% of injuries occurred after a caesarean section. Specifically, where there is Erb's palsy, it is important to determine whether the affected shoulder was anterior or posterior at the time of delivery, because damage to the plexus of the posterior shoulder is considered not due to action by the accoucheur.

(See p. 100 Bundle Q – RCOG guideline at p. 1 of 13)

[101] Still on the topic of excessive force, I am not convinced that the mere expression by DW1 that "I used all the force that I could get but it still would not come out" is *per se* manifestation of negligence on his part. In this regard, it is relevant to bear in mind that he was dealing with a childbirth emergency and he had a narrow window of opportunity of between 3.4 minutes to deliver the baby. He had to act fast and decisively to ensure that the baby does not expire through suffocation/asphyxiation. Hence, it may have been necessary to use necessary traction to get the baby out of the birth canal so that the physical and cerebral damage to the baby is minimised.

[102] Indeed that was exactly the conclusion reached by DW5 who said that, "When the established procedures fail, it is for the doctor in the situation of Dr Quah (DWI) to decide very quickly what else he could do to overcome the dystocia and save the baby from asphyxia" (DW5B, QA16 p. 10). Further he said, "The doctor has to expedite the delivery to reduce the risk of brain damage". (DW5B, QA16 p. 11)

[103] In my view, the choice is for the O&G to make as he is in the "battlefield" so to speak and it is he who has to make a decision as to the amount of traction to be used in a situation where the shoulder dystocia remained intractable. Ultimately, it is my view that DW1 cannot be held liable for negligence because of the use of force. The situation in the delivery room was such that he had to do something to evacuate the baby who was suffocating.

[104] Hence, I am not inclined to the view that DW1's expression in his medical report that he, "used all the force I could get" can be regarded as a basis to hold DW1 liable for negligence. Of course, given that the medical literature calls for gentle (and not excessive) traction, it is tempting to conclude that DW1 used excessive force to deliver the baby. In light of DW5's opinion, I do not think that at that critical moment the conduct of DW1 should be second guessed in this way as there is no way to calibrate one way or the other that he had used excessive force. In this regard, I am not unmindful of PW1's observation that looking at the bundle of injuries sustained by the infant at childbirth, an inference of excessive force can be inferred. Again, it is tempting to lean in favour of the inference that excessive traction was used. However, it is my view that there is no compelling evidence of excessive traction.

[105] In my view, the traction that was used by DW1 was necessary to evacuate the baby whose shoulder was intractable. However, the point really is whether this situation could have been avoided such that traction of this intensity would have been obviated. This therefore brings us back to the issue of the Mc Robert's position and application of *supra*-pubic pressure.

[106] Quite apart from everything else, PW1 had also criticised DW1's method of delivering the baby and in particular DW1's attempt at hooking the anterior armpit of the baby and trying to rotate the shoulder. In this regard, PW1 was of the opinion that DW1 had not used the right delivery manoeuvre. DW1's medical report stated that:

> However, the problem came when I tried to deliver the anterior shoulder. I used all the force that I could get but it still would not come out. I even instructed the Staff Midwife to apply fundal pressure and still nothing visibly happened. I even tried to use my finger to hook on the armpit of the posterior shoulder. After 3 - 4 minutes of trying, I finally delivered the anterior shoulder and the baby.

PW1 opined as follows: "Added to this is the attempt of the doctor to hook his finger on the armpit of the posterior shoulder. He is using force and is working against the natural anatomy to deliver the posterior shoulder. He should in fact locate the posterior hand and sweep it across the chest to deliver the posterior shoulder so that the anterior shoulder falls free and the baby is then delivered."

[107] In his supplementary opinion PW1 said, "With regards to my opinion regarding using the finger to hook on the armpit of the posterior shoulder, this is done to access the posterior arm. This manoeuvre should be gently done and the posterior arm should be swept across the chest and face of the infant. These actions deliver the posterior arm out of the vagina (not the anterior shoulder as stated by the doctor). Once the posterior shoulder and arm was delivered, the anterior shoulder is disimpacted from behind the symphysis pubis and the baby will be delivered."

[108] However, DW5's view was that DW1 had performed the manoeuvre correctly. He said, "using the finger to hook on the armpit of the posterior shoulder, if used as an attempt to rotate the shoulder is not wrong" (DW5B, QA13 p. 8), and that though "there are several methods recommended to disengage the impacted shoulder, none could be said to be absolute in that it would secure disengagement". (DW5B, QA13 p. 8).

[109] DW5 also emphasised as follows:

(i) that the strong traction in the words of Dr Quah (DW1) "using all the force that I could get" should be viewed in the context of the circumstances when the established procedures had failed and when the shoulder dystocia remained intractable. (DW5B, QA13 p. 8)

(ii) that "it would not be right to view the measures or manoeuvres adopted by Dr Quah (DW1) in isolation. It is fair to say that the eventual disengagement of the shoulders is a result of the cumulative efforts through both the established measures adopted and the manoeuvres resorted to by Dr Quah (DW1)". (DW5B, QA6 at p. 5).

[110] In this regard, it is pertinent to note that none of the manoeuvres recommended in Guideline 42 of the Royal College of Obstetricians and Gynaecologists (Bundle Q, p. 105) is absolute in that it would secure disengagement.

[111] Hence, Guideline No. 42 Royal College of Obstetricians and Gynaecologists, on the different types of manoeuvres, concludes that "there are no comparative studies available and therefore the accoucheur should base their decision on their training and clinical experience and the prevailing circumstances". (DW5B, QA13 p. 8). In my view, based on DW5's opinion and RCOG guideline, DW1 as the O&G (accoucheur) has to be given maximum leeway and professional discretion to use such manoeuvres and methodology as is appropriate in the circumstances including the use traction and locating and engaging and disimpacting the shoulder and delivering the baby provided he does not omit any fundamental and imperative procedure such as McRobert's position/*supra*-pubic pressure which the profession regards as key to a situation such as shoulder dystocia.

McRobert's Position/*Supra*-Pubic Pressure

[112] It is obvious enough that the real issue in this case is whether DW1 took the appropriate steps as soon as shoulder dystocia was presented. In this regard, it is quite clear from the evidence of PW1, DW1 and DW5 that the first line of response is to do an episiotomy and place the patient in the McRobert's position and to apply *supra*-pubic pressure. The latter two procedures are usually done by the midwife and delivery room nurses and the O&G will proceed expeditiously to extract the baby from the birth canal.

[113] The use of episiotomy is fairly standard procedure for delivery per vagina and more so in the case of shoulder dystocia. In fact, it is the first thing that should be done. Hence, I am puzzled by the plaintiff's complaint in para. 10(h) of the amended statement of claim (p. 7 Bundle A) where under "Butir-butir kecuaian defendan pertama" the following has been pleaded against DW1:

> Gagal untuk melaksanakan dan/atau mengendalikan proses kelahiran anak tersebut secara sempurna mengikut prosedur-prosedur yang selamat di mana Defendan Pertama telah menjalani "episiotomy" tanpa menjalankan sebarang pemeriksaan perubatan atau penyiasatan perubatan yang berkesan.

[114] Anyway, on the point relating to proper steps to be taken, PW1 said that placing the mother in the McRobert's position is imperative as this would basically bring about an anatomical alignment or positioning of the pelvis and the birth canal such that the baby would in most cases, be expelled with ease and without causing any significant damage to the baby.

[115] According to PW1 in most cases of shoulder dystocia, all that is needed is to place the patient in the McRobert's position and for the midwife to apply *supra*-pubic pressure, which would push the foetus downward and out of the birth canal. It is only if this manouevre fails to yield the baby completely that the internal manipulation methods are to be employed.

[116] The opinion of PW1 is supported by the RCOG guidelines which emphasises that the use of the McRobert's position coupled with *supra*-pubic pressure is the first line of response in the management of a shoulder dystocia situation. In my view, the charge of negligence against DW1 pivots on the issue of the use of the McRobert's position and *supra*-pubic pressure. However, it is apparent that DW1's medical case notes and medical reports are conspicuously silent on McRobert's position and *supra*-pubic pressure. But, DW1 says in his witness statements (DW1A and DW1B) that he placed PW2 in the McRoberts position. He said that these were not mentioned in his case notes and medical reports as these were standard procedures.

[117] DW1 steadfastly maintained that he did use the proper delivery manoeuvres and that he did place PW2 in the McRobert's position and used *supra*-pubic pressure. He said that PW1 had wrongly assumed that he (DW1) did not use the McRobert's manoeuvre and *supra*-pubic pressure. In his witness statement (DW1A, QA15 p. 6), DW1 explained the procedures adopted, including the *supra*-pubic pressure and the McRoberts manoeuvre, to overcome the shoulder dystocia. And so, DW1 said that PW1 had unfairly criticised his delivery methodology by erroneously assuming that he (DW1) had used fundal pressure without first applying the established procedure. DW1 says that PW1 had taken his medical report dated 27 February 2001 out of context.

[118] Counsel for DW1 submitted that although the manoeuvres had not been mentioned in DW1's clinical notes (Bundle Q, pp. 14-18) or his medical report dated 27 February 2001 (Bundle Q, pp. 3-5), there is no reason to doubt that these measures had in fact been carried out. In DW1's supplementary witness statement (DWIB, QA12 p. 9) he attempted to explain the omission in his case notes and medical reports. This is his explanation:

> As a matter of practice, I have only recorded matters which are of some significance or importance. The fact that my clinical notes do not record my discussion with the mother on the mode of delivery or the preliminary measures to overcome the shoulder dystocia does not mean that the mother was not consulted or that the preliminary or established measures had not been taken.
>
> My clinical notes do not refer to the *supra*-pubic pressure being applied or the McRoberts' manoeuvre being undertaken as such pressure and manoeuvre were undertaken as a matter of course on the onset of the shoulder dystocia.
>
> Incidentally, my clinical notes do not refer to 'using all the force that I could get' or 'fundal pressure' or using 'my finger to hook on the armpit of the posterior shoulder' although they were in fact undertaken as stated in my medical report of 27.2.2001. [Bundle Q, page 4]

[119] However, in this regard it is necessary to consider DW1's evidence and test it against the testimony of PW2 (the patient) and PW3 (her husband and who was in the delivery room) who were both shown a diagram of the McRobert's position (as per RCOG Guideline) and they both confirmed that PW2 was never placed in the McRobert's position.

[120] Further DW1's evidence must also be tested against the contemporaneous documentary evidence and the overall probabilities of the case. Significantly, PW2 and PW3 were not pointedly challenged on their assertion in this respect. And so the question is, if PW2 was placed in the McRobert's position and *supra*-pubic pressure was applied, then it is relevant to ask why is this critical procedure not mentioned in DW1's medical report dated 23 October 2000 (pp. 1-2 Bundle Q) and medical report dated 27 February 2001 (pp. 3-5 Bundle Q), the latter of which addressed to Messrs Shearn Delamore & Co.

[121] Also, it is relevant to ask, why is there no mention of it in the medical case notes? If PW2 was indeed placed in the McRobert's position then this can surely be corroborated by the midwife and the other delivery room nurses who assisted DW1. It is not in dispute that the baby's head was delivered at 2.03am and the baby was fully delivered at 2.06am. Hence, going by contemporaneous records, DW1 had a small window of three (max four) minutes to deliver the baby.

[122] It is therefore questionable whether within the span of three to four minutes, DW1 could have placed PW2 in the McRobert's position and asked the midwife to apply *supra*-pubic pressure and then switch to fundal

pressure and attempt to hook the baby's shoulder, do an internal rotation and use force and fully deliver the baby at 2.06am.

[123] If indeed he had used the McRobert's position and asked the nurse/midwife to apply *supra*-pubic pressure then, given the importance in the use of the McRobert's position and *supra*-pubic pressure, he would have surely mentioned it in his report, particularly his medical report dated 27 February 2001 which was addressed to his solicitors Messrs Shearn Delamore & Co.

[124] It is also significant and quite telling that none of the nurses who were in the delivery room on 19 September 2000 were called to testify on DW1's behalf. Had they testified and backed up DW1's evidence, then perhaps that might have neutralised PW2 and PW3's version of what took place in the delivery room. It is also significant and perplexing that this is only mentioned in DW1's witness statements which were filed shortly before the trial, which took place 14 years after the delivery.

[125] This leads me to entertain the possibility that this was an afterthought on the part of DW1. Either that or DW1 was mistaken as to the use of McRobert's position and the application of *supra*-pubic pressure. Either way, I am impelled to the view that DW1's evidence as per his witness statements (DW1A and DW1B), where he asserts that he used the McRobert's position and applied *supra*-pubic pressure is inherently incredible. In this context, I must say that I have no reason to doubt the evidence of PW2 and PW3 who said that PW2 was not placed in the McRobert's position. Put *tersely*, PW2 and PW3's evidence about the McRobert's position had a ring of truth about it, whereas the assertion by DW1 that he had placed PW2 in the McRobert's position and applied *supra*-pubic pressure is in all the circumstances, doubtful.

[126] Having considered all of the evidence as alluded to above, I am of the opinion that it is more probable that PW2 was not placed in the McRobert's position and *supra*-pubic pressure was not applied. In this regard, given the absence of any mention in the case notes and in DW1's medical reports to back up the assertion that he placed PW2 in the McRobert's position and used *supra*-pubic pressure and coupled with a failure to challenge PW2 and PW3 who said that PW2 was not placed in the McRobert's position and the failure to call the midwife and other delivery nurses to corroborate DW1's version, I am impelled to the conclusion that it is more probable than not that PW2 was not placed in the McRoberts' position and *supra*-pubic pressure was not applied. As such, in view of the pre-eminent position that McRobert's position and *supra*-pubic pressure plays in the resolution of shoulder dystocia, I am of the view that the failure by DW1 to employ these steps constitutes negligence.

[127] I am therefore of the view that it was the baby's shoulder dystocia and DW1's flawed delivery method (ie failure to employ the McRobert's position and apply *supra*-pubic pressure) which left the infant with the bundle of injuries which she now complains of and for which she seeks

compensation. In coming to the conclusion as regards the negligence of DW1, I was satisfied that in failing to place PW2 in the McRobert's position and failing to simultaneously apply *supra*-pubic pressure, DW1 "fell below the standards of a reasonable competent practitioner in his field". (*Hucks v. Cole* [1968] 112 SJ 483).

[128] For completeness, I also hold that all other allegations against DW1, that is erroneous estimation of fetal weight, failure to advise PW2 to elect for caesarean section, failure to stop oxytocin, the use of force to deliver the baby and the method of internal rotation etc are not a manifestation of negligence or flawed delivery methodology.

[129] Ultimately, DW1's negligence lies plainly in his failure to place PW2 in the McRobert's position and to apply *supra*-pubic pressure. Had he done so, there is according to the literature and expert opinion, a good chance that the baby may have been spared the traumatic birth injuries or at least she would have been delivered with minimal injuries. It may of course be argued that since DW1 has been exonerated of the complaint if using excessive force, he should not be held be liable for the bundle of injuries sustained by the infant at birth. The answer to that argument is this: whatever force that was used on the infant would have been unnecessary had DW1 followed the RCOG protocol or the O&G gold standard for resolution of shoulder dystocia and placed PW2 in the McRobert's position and applied *supra*-pubic pressure. As such, for the reasons that I have discussed above, I hold that on a balance of probabilities, the plaintiff in the medical negligence claim has succeeded in establishing negligence against DW1.

Injuries

[130] I will now deal with the injuries and quantum. There is no question that she suffered the following injuries and the surgical procedures:

(i) anoxic-ischaemic injury to the brain;

(ii) brachial plexus injury (Erb's palsy);

(iii) phrenic nerve injury with diaphragmatic paralysis;

(iv) bilateral adrenal haemorrhage as well as hypoxic gut with transient lieus.

[131] The phrenic nerve injury with diaphragmatic paralysis initially compromised the infant's ability to breath and she had to be on a ventilator at the NICU of the hospital and eventually underwent a surgical procedure called right thoracotomy and plication of the right hemi-diaphragm. She also suffers from ADHD and has a learning disorder, but DW3 seriously doubts that there is any correlation between the anoxic-ischaemic injury to the brain and the infant's ADHD and learning disorder. DW3 puts it as a mild case of ADHD whereas PW4 declined to pigeonhole the degree or extent of the ADHD condition.

A **Attention Deficit Hyperactivity Disorder (ADHD)**

[132] I have already reproduced the evidence of PW4 with regard to her opinion on Natahlie's ADHD and learning disorder condition. However, counsel for DW1 has submitted that more weight should be given to DW3's opinion as he was the Paediatrician and Neonatologist who was
B responsible for care and management of the baby from the time of delivery to her discharge. It is said that DW3 is not only best qualified but is amply justified to say in his supplementary witness statement as follows:

> I would say that attention deficit hyperactivity disorder is a behavioural disorder which manifests at the age of 6 to 12 years and is a disorder
C where the cause is organically unknown. (DW3B, QA4, p. 3).
>
> It is obviously not related to the lesions in the brain as described by Dr Ho Chee Keong (DW-2) in his MRI brain report as the child did not display any signs or symptoms of cerebral palsy or mental retardation soon after birth following a difficult and prolonged delivery. (DW3B,
D QA4, p. 3).
>
> The attention deficit hyperactivity disorder in this case has nothing to do with the birth trauma or the physiology of the brain after the birth trauma considering also the assessment of her mental well-being by Dr Ajay K Sharma (PW5) and Dr Dinesh Chaudhury (DW4). (DW3B, QA6
E page 4)

[133] I noted that PW4 was somewhat reluctant under cross-examination to rate the severity or otherwise of the alleged disorder whereas in DW3's supplementary witness statement he said as follows:

> As Dr Zasmani (PW-4) had assessed Natahlie Nordberg to be able 'to
F engage and co-operated well in the session', 'displayed poor attention span about 10-15 minutes through the period', 'did participate but passively during English lesson and got most answers correct', I am of the view that her attention deficit hyperactivity disorder is on a mild side. (DW3B, QA5 page 4).
>
G As attention deficit hyperactivity disorder is a behavioural disorder where more often than not the cause is unknown, children do tend to outgrow the disorder in adult life, particularly where the disorder is quite mild and not acute. Although attention deficit hyperactivity disorder does persist into adulthood in about 30-50% of cases, those affected are likely to develop coping mechanisms as they mature, thus compensating for
H the symptoms. (DW3B, QA6 page 6). (emphasis added)

[134] Hence, in his submissions, counsel for DW1 says that it is indeed questionable whether the infant does have attention deficit hyperactivity disorder, and if so, whether the attention deficit hyperactivity disorder is nothing more than a behavioural nuance of a fairly active child or for that
I matter "a bright girl with a great future ahead of her". In my view, PW4 has determined quite conclusively that the infant suffers from ADHD and learning disorder which she attributes to birth trauma. PW4 is a specialist in child and adult psychiatric and is eminently qualified to render an

opinion, particularly after having examined the infant in all situations. As such, PW4's conclusion that the infant has ADHD/learning disorder which was caused by birth trauma is unimpeachable.

[135] But, she may have overstated her conclusions by concluding that these conditions will remain in perpetuity whereas DW3 opines that with passage of time, maturity and coping mechanisms will set in and the intensity of the disorder may abate or weaken.

[136] However, PW4 appears not to have left room for this possibility. Also, DW3 opines that the infant's condition is probably on the mild side. Again, PW4 did not conclude one way or the other as to the seriousness or otherwise of the ADHD/learning disorder. In my view, the plaintiff has proven on a balance of probabilities that Natahlie has ADHD and learning disorder which were cause by birth trauma. But, I agree with DW3 who opines that the infant's condition is on the mild side. I am certain that a child who has a severe case of ADHD and learning disorder would not have left a lasting impression on two medical specialists (PW5 and DW4) who both opined that she is a bright girl with a great future ahead of her. Also, academically she was not a total failure and this may be gleaned from the fact that she attained an "A" for English in her standard six public examinations.

[137] But, PW4 did say that the infant would require medication and behaviour therapy to treat ADHD and counselling to help with acceptance and to increase her skills to cope with having a disability. Whilst the infant does not have mental retardation, she definitely has pockets of problems in certain intellectual aspects. As far as PW4 is concerned by the process of elimination and since there is demonstrable evidence of birth trauma, the most likely cause of the ADHD and learning disorder is the birth trauma. This is also bolstered by the fact that Natahlie's older sibling is quite normal and does not have ADHD or learning disorder.

[138] I am inclined to accept the evidence of PW4 as to the existence and extent of the infant's behavioural and intellectual problems. As for the causal connection between ADHD and learning disorder and the infant's birth trauma, I am inclined to accept her opinion particularly as there is no evidence of any genetic contribution to these conditions. Whilst she does have ADHD and learning disorder, it cannot be said that the infant is suffering from any mental retardation.

[139] In this regard, it is important to note that for almost six years she went to a normal primary school and it was after her standard six examinations that PW2 decided to send her to home schooling. The topic of mental retardation is dealt with elsewhere in this judgment.

[140] In this regard, whilst PW4 explained that the infant has a short attention span whilst in school and was depressed due to her physical disability and the jeering from her peers in school, I cannot ignore the fact that the infant scored an "A" for English in the standard six public examination but did badly in mathematics. Ordinarily, this would be regarded as a common occurrence as lack of attention and doing badly in mathematics is quite a normal phenomena for children who have no aptitude for mathematics. But in this case, there is a history of birth trauma and so PW4 in her expert opinion has made a causal connection between birth trauma and ADHD or learning disorder after having ruled out genetic causes.

[141] In this regard, I prefer and would give more weight to the evidence of PW4 (child and adult psychiatrist) who examined the infant in her clinic and at school as opposed to DW3 (consultant neonatologist and paediatrician) who looked after the infant whilst she was in NICU and saw her in the outpatient clinic until she was 19 months old. Thereafter, DW3 had no contact with the infant. Further, PW4's area of specialisation is in the field of ADHD and learning disorders in children whereas DW3 specialises in medical conditions for newborns and children.

[142] DW3 said that when he saw the infant at 19 months she had no neurological deficits. But PW4 has explained that conditions such as ADHD and learning disorder will only manifest themselves when the child is about 6-12 years old. There is logic and reasonableness in PW4's evidence as I am not convinced that a 19 month old baby can be properly tested for intellectual and behavioural misalignments or deficiencies.

Anoxic Ischaemic Injury (Whether There Is Permanent Neurological Deficit/Mental Retardation)

[143] As for the anoxic-ischaemic injury to the infant's brain, again there is no dispute that it was caused by the childbirth trauma. The only issue is whether there is any long lasting neurological damage. On this score, I note that there is no neurological assessment that was done by a neurologist or paediatric neurologist and all sides were just dabbling in conjecture. On this point, I had indicated to plaintiff's counsel during case management that issues relating to neurological deficit or neurological damage has to be dealt with by a neurologist and not the medical specialists from other disciplines.

[144] However, during the trial, there was no evidence by any neurologist so as to confirm any long lasting neurologist damage. In this regard, it is apparent from the amended statement of claim dated 21 September 2010 that the anoxic-ischaemic injury to the brain relied upon as the basis of the plaintiff's claim is founded on the imaging impression of the MRI film or the MRI report of Dr Ho Chee Keong (DW2).

[145] In his witness statement (DW2A, QA8, AQ11 p. 3), DW2 stated that, "the clinical history of the child is important in that the history would help determine the cause of the changes, if any, in the brain" and that the "finding of anoxic-ischaemic injury to the brain is merely an impression on the basis of the images of the features that appeared in the MRI film of the brain". DW2 had further in his witness statement (DW2A, QA10 p. 3) that "Anoxic-ischaemic injury to the brain means that parts of the brain had been affected because of inadequate oxygen as a result of inadequate flow of blood to those parts".

[146] In this regard, Dr Chua Chee Peng (DW3), the Consultant Paediatrician and Neonatologist, who had attended to Natahlie Nordberg during the first four weeks after birth when she was in the hospital and later as an outpatient till she was 19 months (DW3B, QA3 p. 3) had first said his earlier witness statement (DW3A, QA13 p. 5) "that although the child had recovered in that her cerebral functions had become normal with no obvious neurological deficit, the parts of the brain affected during the difficult and prolonged delivery would continue to show the effects of birth trauma with asphyxia". He then clarified and stated the following in his supplementary witness statement:

> I wish to clarify that the parts of the brain affected during the difficult and prolonged delivery would continue to show the after effects or scars of birth trauma with asphyxia and that the after effects or scars as presented by the imaging features of the parts of the brain affected would continue to show in an MRI film.
>
> The affected parts of the brain would appear in any MRI of the brain and are medically described as bilateral periventricular leucomalacia (PVL).
>
> Lest it be said that the after effects or scars as presented in an MRI film are suggestive of 'demyelinating disease' or nerve degeneration, the fact is that the after effects or scars are merely an MRI impression of that part of the brain affected as a result of birth trauma. (See: DW3B, QA2 pg 2)

[147] DW3's conclusion was that except for the fact that the part of the brain affected would continue to show the after effects or scars of birth trauma with asphyxia, Natahlie had recovered completely. He said that, "her development milestones were relatively normal and there were no indications or symptoms of cerebral palsy, mental retardation, epilepsy or blindness". (DW3B, QA3 p. 3)

[148] As such, it was submitted for DW1 that Natahlie's development milestones have enabled her to attend normal school without the need for any medical assistance or any special care and attention to enable her to attend school. Counsel submitted that it was the development milestones

achieved by Natahlie that enabled Dr Ajay Sharma (PW5) to describe her in his specialist report (Bundle B, p. 32) as "a bright girl with a great future ahead of he?" and Dr Dhiresh Kumar Chaudhury (DW4) to describe her in his Orthopaedic Specialist Report as "a bright young girl". (Bundle Q, p. 130). In the circumstances, counsel for DW1 submitted that there is no question of any mental disability or mental deficiency as alluded to in the report of Dr Ravindran Jegasothy (PW1) (Bundle F, p. 2).

[149] On the issue of mental retardation, DW3 had in his supplementary witness statement (DW3B, QA7 p. 5) stated as follows:

> Mental deficiency by definition is mental retardation where the intellectual capacity has failed to develop or the intelligence affected to such extent requiring care and protection. The person affected may also be spastic, blind, deaf and epileptic. (DW3B, QA7 page 5)
>
> If the child has in fact mental deficiency due to anoxic-ischaemic brain injury, her problems should have started in infancy and would be non-progressive in nature. On the contrary, her development milestones were relatively normal enabling her to attend normal school. (DW3B, QA7 page 5)

[150] In my view, there is no evidence of mental retardation in the sense as explained by DW3. The only lingering issue in this regard is the ADHD condition and learning disorder which I have dealt with earlier in this judgment. What is indisputable is that the infant did suffer hypoxia or lack of oxygen to the brain and for which she was ventilated and underwent a surgical procedure so that she could breathe properly. Indeed, there is no suggestion that she is presently having any breathing or respiratory issues or any neurological issues, other than the intellectual and behavioural issues that stem for the observations and opinion made by PW4 who said that ADHD and learning disorder were been caused by the birth trauma.

[151] As such, the anoxic-ischaemic injury to the brain must be regarded as being of a transient nature with no long lasting effects such as epilepsy or other cerebral related problems. By all accounts the anoxic-ischaemic injury to the brain appears to have left the infant with no cerebral damage other than ADHD and learning disorder.

[152] In my view, the infant does indeed have ADHD and learning disorder but I am not convinced as to its severity. DW3 said it is on the "mild side". I am unable to conclude one way or the other as to where to draw the line. The plaintiff's side appear to paint a bleak picture whereas DW3 and DW4 seem to opine that the infant has a bright future ahead of her notwithstanding the disabilities. In my view, the evidence seems to lean more in favour of the defendants' view, which is that the ADHD and learning disorder is on the mild side.

Quantum

[153] I will now deal with quantum. In his submissions, counsel for the plaintiff has submitted that the following amounts should be allowed. For convenience, I have tabulated the items that have been claimed.

Injury/Loss	RM
Shoulder dystocia (pain and suffering and loss of amenities) (page 29 of submissions)	450,000
Anoxia-Ischaemic Injury (page 30 of submissions)	400,000
Shoulder dystocia/Brachial plexus - mental anguish, emotional and psychological injury and embarrassment (page 30 of submissions)	100,000
Special damages	
(a) Kos pendaftaran dan rawatan pada 19 September 2000	9,796.80
(b) Kos kelahiran anak dan rawatan lanjut	20,671.50
(c) Kos laporan-laporan perubatan dan laporan pakar (3 pakar PW1A, PW4A & PW5A)	10,450
(d) Kos transcript	2,370.69
Nursing care - services of a specialized maid @ RM1,000 x 16 years x 12 (page 31 of submissions)	192,000
Costs of Transport - cost of taking the child to school and other outing or school activities (RM300 x 10 x 12) (page 31 of submissions)	36,000
Cost for special school RM1,000 x 7 x 12	84,000
Cost of Physiotherapy	50,000
Loss of Prospect of Marriage	100,000
Aggravated Damages	100,000
Exemplary Damages	30,000
Extra Food and Nourishment @ RM200 x 10 x 12	240,000
TOTAL	**1,825,288.99**

[154] As far as the claim and computation of damages for the injuries are concerned, I must say at the outset that the amounts that have been claimed are unsupported by any case authority and have been plucked from thin air. Furthermore, there is also an obvious duplication of items claimed.

[155] For instance the claim for RM450,000 for shoulder dystocia and another sum of RM100,000 for shoulder dystocia/brachial plexus is a glaring example of the duplication in the plaintiffs claim. In this regard, I should also point out that "shoulder dystocia" is not an injury *per se*, but rather is an obstetric condition whereupon injuries may follow in attempting to resolve the shoulder dystocia. I can understand the claim for the brachial plexus injury secondary to shoulder dystocia but I must confess that I do not comprehend the claim for shoulder dystocia as a stand above item.

[156] As stated earlier, there is no case authority in the written submission by the plaintiff's counsel which the court could have relied upon as a guide and as a benchmark for the quantum that should be allowed for each of these injuries. I therefore decided to refer to the Compendium of Personal Injury Awards – (Revised as at 11 October 2013) ("the Compendium") as a neutral basis for benchmarking the quantum. Of course, I have no such burden to do so and I could have dismissed the quantum aspect of the claim. However, I felt compelled to refer to the Compendium, solely to do justice to the infant.

Brachial Plexus Injury To Upper Limb

[157] The Compendium states that the range is from RM44,000 to RM71,500 and the factors to be taken into account are age (whether infant, young person, middle age or in the prime of their lives), whether male or female, married or unmarried (and the extent to which injuries would affect prospects of marriage), whether injuries affect overall body symmetry and whether injuries would affect the nature of work or employment (see p. 18 of the Compendium of Personal Injury Awards revised as at 11 October 2013). Having taken into account the observations of Dr Ajay Sharma (PW5) and Dr Dhiresh Kumar Chaudhury (DW4), I am of the view that a sum of RM75,000 would in all the circumstances be fair and reasonable.

Intellectual Impairment

[158] The range of awards for intellectual impairment is RM55,000 to RM165,000 and the factors to be taken into account are age (whether infant, young person, middle age or in the prime of their lives), whether male or female, married or unmarried (and the extent to which injuries would affect prospects of marriage), whether injuries affect overall body symmetry and whether injuries would affect the nature of work or employment (see p. 20 of the Compendium).

[159] Under this category, the quantum would increase exponentially depending on the severity of the intellectual impairment. In this case, there is obviously no mental retardation. What the infant suffers from is ADHD and a learning disorder and has pockets of intellectual problems.

[160] It is difficult to pigeonhole the extent of the infant's cerebral disability into any particular category but I have reminded myself that DW3 had stated that in his view, the infant's disability or impairment is on the mild side. In this regard, I am also mindful of the observations of the two orthopaedic specialists who remarked that the infant appeared to be a bright girl with a great future ahead of her. Whilst in no way diminishing the conclusions of the child psychiatrist (PW4), I have to say that I am unable to accede to the submission of counsel for the plaintiff who seems to paint a gloomy and dismal picture about the infant's future.

[161] DW3 said that ADHD may resolve itself once the infant reaches adulthood whereas PW4 said that the ADHD condition will be perpetual. Unfortunately, I did not have the opportunity of seeing and hearing the infant from the witness box as that may have given me a somewhat clearer idea as to her intellectual ability. In this regard, I reminded myself that whilst she failed in mathematics, she scored an "A" for English in the standard six public examinations.

[162] I note that counsel for the plaintiff has not asked for separate award for the impairment in intellectual abilities. However, in this regard, it is important to appreciate that ADHD and learning disorder are said to be secondary to anoxia-ischaemic injury. Hence, I am of the view that the ADHD and learning disorder have to be looked at from that perspective. Here the injury is hypoxia or cessation of blood and oxygen to the brain which has cleared up save and except for ADHD and learning disorder. The Compendium does not cater for hypoxia, but there is a range of awards for intellectual impairment.

[163] In my view, learning disorder and ADSH somewhat fall within the category of intellectual impairment. Further, I am of the view that this a case of intellectual impairment which is on the mild side and as such, a sum of RM60,000 would be fair and reasonable for this injury. The sum of RM60,000 encompasses the anoxia-ischaemic injury, ADHD and learning disorder.

Diaphragm Damage And Other Injuries

[164] The Compendium recommends a sum of between RM16,500 to RM19,500 for diaphragm damage (see p. 25 of the Compendium). But in this case, there is no specific claim for diaphragmatic paralysis and no separate amount has been submitted.

[165] If a submission had been made by plaintiff's counsel, I would have considered the same and awarded a sum of RM16,000. However, since there is nothing in the submissions pertaining to all the other associated injuries such as right phrenic nerve paralysis and diaphragm paralysis, bilateral adrenal haemorrhage as well as hypoxic gut with transient lieus, I have no choice but to ignore the same. The plaintiff had also undergone a surgical procedure called right thoracotomy and plication of the right hemi-diaphragm.

[166] But these surgical procedures are not mentioned, as part of the plaintiff's claim for quantum. As such, I will not venture to make an award for these injuries which counsel for the plaintiff has inexplicably left out from his submissions. I do not think that it is proper for me to fill in the gap left by counsel in his submissions.

Special Damages

[167] As for the claim for special damages for RM9,796.80 and RM20,671.50) ("kos pendaftaran dan rawatan/kos kelahiran anak dan rawatan lanjut) these items have been proven as they are the amounts that the hospital is claiming as outstanding charges and which would not have been incurred if not for the negligence of DW1.

[168] As for the cost of specialist reports, there is no proof that a sum of RM10,450 was incurred. There is no proof of the cost of the specialist reports. As such, I am not allowing these items. The bill and the receipt for payment for these items should have but were not produced.

[169] Similarly, the sum of RM2,370 as cost of transcription services cannot be allowed as it has not been proven. In my view, this should in any event be claimed under costs and not as special damages. As such, I may allow the cost of transcription when I hear parties on cost.

[170] My decision on the other items that have been claimed as general damages is as follows:

(i) Nursing care – services of a specialised maid.

There is no evidence that the infant is in need of any nursing care. By all accounts she is a normal child with some residual issues such as ADHD and a learning disorder. The claim for nursing care is disallowed.

(ii) Costs of transport – cost of taking the child to school and other outing or school activities. The parents of child have to bear the cost of bringing up their child and there is no legal basis for imposing these expenses on a tortfeasor. The claim for transport to school is disallowed.

(iii) Cost for special school

Whilst PW4 did allude to the need for counselling so that she is able to cope with her ADHD and physical disability (brachial plexus injury), she did not quantify the amount that would be needed and the duration of such counselling. I do not recollect PW4 recommending that the infant be sent to a special school. Again it must be emphasised that the infant does not suffer from mental retardation. This has been lucidly explained by DW3 (Dr Chua Chee Peng). The suggestion that she needs to be sent to a special school is misplaced to say the least. The claim for costs of special school is disallowed.

(iv) Cost of physiotherapy

PW5 and DW4 were both agreed that the infant's brachial plexus injury is permanent and there is no hope of any rehabilitation to regain loss of use. As such, it is idle to speak of any form of physiotherapy. The claim for physiotherapy is disallowed.

(v) Loss of prospect of marriage

This has been taken into account when the award of damages was made for brachial plexus injury and intellectual impairment/anoxic-ischaemic injury to the brain. A separate claim for loss of prospects of marriage cannot be entertained as that would result in a duplication and is therefore disallowed.

(vi) Aggravated and exemplary damages

There are various legal formulations for the definition of aggravated and exemplary damages. But none was presented to this court. As such, I do not intend to embark on an intellectual excursion on this topic as I would be trudging alone on this journey. What is notable is that other than submitting that a sum of RM100,000 and RM30,000 should be allowed for aggravated and exemplary damages respectively, there was nothing by way of evidence or legal propositions as may warrant a consideration of a claim under these heads. In any event, I do not see how aggravated and exemplary damages are applicable to the facts of the present case. As such, I am disallowing the claim for aggravated and exemplary damages.

(viii) Extra food and nourishment

This would be allowed only where there is medical evidence to support the claim. In this case, there is no medical evidence that suggests that there is a need for extra food and nourishment for the injuries sustained by the infant. The claim in this regard is disallowed.

The Hospital's Liability (Medical Negligence Claim)

[171] In this regard, the plaintiff had pleaded that the hospital was vicariously liable for the actions and omissions of DW1 who was a Consultant O&G at the hospital. But in their defence, the hospital has pleaded that at all material times, DW1 was an independent contractor and that the hospital was not liable for DW1's alleged negligence.

[172] In this regard, the plaintiff's entire effort at trial was directed at establishing DW1's negligence but no evidence was led in respect of the hospital's liability. The plaintiff has not proven that DW1 was a servant or agent or employee of the hospital and has not discharged their legal burden of proving vicarious liability against the hospital. Also, no evidence was lead to suggest that the hospital was negligent in terms of their nursing care or in their support system. As such, I am dismissing the plaintiffs claim against the hospital.

The Hospital's Claim (Suit No. 22NCVC-563-08-2012)

[173] The parents of the infant (PW2 and PW3), whilst testifying in the medical negligence claim agreed that they are liable to settle the outstanding charges. The amount is not in dispute. It remains outstanding until this day. Elizabeth Chin Yew Kim (PW2) is the primary patient and Mats Nordberg (PW3) is the guarantor. The hospital's claim for the sum of RM30,467.85 is therefore allowed with interest at 5% per annum from 30 December 2014 until the date of full payment or realisation.

The Order

[174] Suit No. 22NCVC-563-08-2012 (the hospital's claim):

The defendants are to pay the plaintiff the sum of RM30,467.85 with interest at 5% per annum from 30 December 2014 until the date of full payment or realisation. The defendants are to pay costs of RM3,000 to the plaintiff.

[175] Suit No. 22NCVC-224-03-2012 (medical negligence claim):

(i) plaintiff's claim against the first defendant is allowed. The first defendant is ordered to pay the plaintiff general damages in the sum of RM150,000, the computation of which is as follows;

Brachial plexus injury	RM75,000
Intellectual Impairment (ADHD/Learning Disorder) and Anoxic-Ischaemic Injury	RM75,000

(ii) the first defendant is ordered to pay the plaintiff special damages in the sum of RM30,467.25 (being RM9,796.80 plus RM20,671.50).

(iii) interest on general damages is allowed at the rate of 5% per annum from 19 September 2000 until the date of full payment or realisation.

(iv) Interest on special damages is allowed at the rate of 5% per annum from 30 December 2014 until the date of full payment or realisation.

(v) The first defendant is to pay the plaintiffs' costs of the action in the sum of RM30,000.

(vi) The plaintiff's claim against the second defendant is dismissed and the plaintiff is to pay the second defendant's costs in the sum of RM5,000.

Order accordingly.